

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Claire A. Cajacob and Jingdong Liu

Appl. No.: To be assigned

Filed: January 20, 1999

For: **Nucleic Acid Molecules and Other
Molecules Associated With the
Tetrapyrrole Pathway**

Art Unit: To be assigned

Examiner: To be assigned

Atty. Docket: 04983.0025.US01/38-
21(15090)B

J-542 U.S. PTO
09/233218



Statement Regarding Sequence Submission

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. § 1.821(f), the paper copy of the Sequence Listing and the computer readable copy of the Sequence Listing submitted herewith in the above-mentioned application are the same.

Respectfully submitted,

David R. Marsh (Reg. No. 41,408)

Date: January 20, 1999

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- <110> CaJacob, Claire A.
Liu, Jingdong
- <120> Nucleic Acid Molecules and Other Molecules Associated with The
Tetrapyrrole Pathway
- <130> 04983.0025.US01/38-21(15090)B
- <150> No. 60/067000 filed November 24, 1997, No. 60/069472
filed December 9, 1997, No. 60/072,027 filed January 21,
1998, No. 60/074,201 filed February 10, 1998, No.
60/074282 filed February 10, 1998, No. 60/074280 filed
February 10, 1998, No. 60/074281 filed February 10,
1998, No. 60/074566 filed February 12, 1998, No.
60/074567 filed February 12, 1998, No. 60/074565 filed
February 12, 1998, No. 60/075462 filed February 19,
1998, No. 60/075459 filed February 19, 1998, No.
60/075461 filed February 19, 1998, No. 60/075464 filed
February 19, 1998, No. 60/075460 filed February 19,
1998, No. 60/075463 filed February 19, 1998, No.
60/077231 filed March 9, 1998, No. 60/077229 filed
March 9, 1998, No. 60/077230 filed March 9, 1998, No.
60/078368 filed March 18, 1998, No. 60/080844 filed
April 7, 1998, No. 60/083067 filed April 27, 1998, No.
60/083387 filed April 29, 1998, No. 60/083388 filed
April 29, 1998, No. 60/083389 filed April 29, 1998, No.
60/085224 filed May 13, 1998, No. 60/085223 filed May
13, 1998, No. 60/085222 filed May 13, 1998, No.
60/086186 filed May 21, 1998, No. 60/086187 filed May
21, 1998, No. 60/086185 filed May 21, 1998, No.
60/086184 filed May 21, 1998, No. 60/086183 filed May
21, 1998, No. 60/086188 filed May 21, 1998, No. 60/089,
524 filed June 16, 1998, No. 60/089,810 filed June 18,
1998, No. 60/089,814 filed June 18, 1998, No. 60/091,
035 filed June 29, 1998, No. 60/091,405 filed June 30,
1998, "Nucleic Acid molecules and Other Molecules
Associated with the Plant Sugar and Nitrogen
Transporters Pathway" docket No. 38-21(15412)A filed
June 30, 1998, No. 60/099670 filed September 9, 1998,
No. 60/099697 filed September 9, 1998, No. 60/100674
filed September 16, 1998, No. 60/100672 filed September
16, 1998, No. 60/101130 filed September 21, 1998, No.
60/101,508 filed September 22, 1998, No. 60/101344
filed September 22, 1998, No. 60/101347 filed September
22, 1998, No. 60/101343 filed September 22, 1998, No.
60/104,128 filed October 13, 1998, No. 60/104,127 filed
October 13, 1998, No. 60/109,018 filed November 18,
1998, No. 60/108,996 filed November 18, 1998, "Nucleic
Acid Molecules and Other Molecules Associated With
Plants" docket No. 38-21(15075)B filed November 24,
1998, No. 09/210,297 filed December 8, 1998, "Nucleic
Acid Molecules and Other Molecules Associated with
Plants" docket No. 38-21(15668)A filed December 11,

1998 and No. 60/113,224 filed December 22, 1998

<151> No. 60/067000 filed November 24, 1997, No. 60/069472 filed December 9, 1997, No. 60/072,027 filed January 21, 1998, No. 60/074,201 filed February 10, 1998, No. 60/074282 filed February 10, 1998, No. 60/074280 filed February 10, 1998, No. 60/074281 filed February 10, 1998, No. 60/074566 filed February 12, 1998, No. 60/074567 filed February 12, 1998, No. 60/074565 filed February 12, 1998, No. 60/075462 filed February 19, 1998, No. 60/075459 filed February 19, 1998, No. 60/075461 filed February 19, 1998, No. 60/075464 filed February 19, 1998, No. 60/075460 filed February 19, 1998, No. 60/075463 filed February 19, 1998, No. 60/077231 filed March 9, 1998, No. 60/077229 filed March 9, 1998, No. 60/077230 filed March 9, 1998, No. 60/078368 filed March 18, 1998, No. 60/080844 filed April 7, 1998, No. 60/083067 filed April 27, 1998, No. 60/083387 filed April 29, 1998, No. 60/083388 filed April 29, 1998, No. 60/083389 filed April 29, 1998, No. 60/085224 filed May 13, 1998, No. 60/085223 filed May 13, 1998, No. 60/085222 filed May 13, 1998, No. 60/086186 filed May 21, 1998, No. 60/086187 filed May 21, 1998, No. 60/086185 filed May 21, 1998, No. 60/086184 filed May 21, 1998, No. 60/086183 filed May 21, 1998, No. 60/086188 filed May 21, 1998, No. 60/089,524 filed June 16, 1998, No. 60/089,810 filed June 18, 1998, No. 60/089,814 filed June 18, 1998, No. 60/091,035 filed June 29, 1998, No. 60/091,405 filed June 30, 1998, "Nucleic Acid Molecules and Other Molecules associated with the Plant Sugar and Nitrogen Transporters Pathway" docket No. 38-21(15412)A filed June 30, 1998, No. 60/099670 filed September 9, 1998, No. 60/099697 filed September 9, 1998, No. 60/100674 filed September 16, 1998, No. 60/100672 filed September 16, 1998, No. 60/101130 filed September 21, 1998, No. 60/101,508 filed September 22, 1998, No. 60/101344 filed September 22, 1998, No. 60/101347 filed September 22, 1998, No. 60/101343 filed September 22, 1998, No. 60/104,128 filed October 13, 1998, No. 60/104,127 filed October 13, 1998, No. 60/109,018 filed November 18, 1998, No. 60/108,996 filed November 18, 1998, "Nucleic Acid Molecules and Other Molecules Associated With Plants" docket No. 38-21(15075)B filed November 24, 1998, No. 09/210,297 filed December 8, 1998, "Nucleic Acid Molecules and Other Molecules Associated with Plants" docket No. 38-21(15668)A filed December 11, 1998 and No. 60/113,224 filed December 22, 1998

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 agaaattgat gcaataaatg aaccttatag accaattcct tctggggcaa tatctgagaa 180
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<221> unsure

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<223>

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 ctgttttgcc accattttct gtctcatttt ccaggaggag attatcaatt agagcaacag 180
 aaactgatac taatgaagtt caatctcagg cgccgggtac agcaccatca aaagatgggt 240
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<211> 156

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<213> Glycine max

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atcgcttgcg ttcaagctcg acccggtttg ccaccctttt ctgtctcatt ttccaggagg 180
agactatcaa ttagagcaac agaaactgat accaatgaag ttcaatctca ggcaccgggt 240
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<221> unsure
<222> (44),(62)...(63)
<223> unsure at all n locations

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tcattttcca ggaggagact atcaattaga gcaacagaaa ctgataccaa tgaagttcaa 180
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atcaa 245

<210> 6
<211> 268
<212> nucleic acid
<213> Glycine max

<400> 6

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cacccttttc tgtctcattt tccaggagga gactatcaat tagagcaaca gaaactgata 180

gncanctgct angganccta cntncactgg cngagggctt tgaacttagc ctnnnggaca 60
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tacccttcaa aggcttgatn atcgtaggnt cacacgacag ggnacacaaa cacattggct 180
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gtgttggaac caaccatctc gggcatttcc tcctttcgcg ccttttgctt gacgacttga 180
acaaatctga ctacccttcg aagcgggttg tcatgtaggc tcaatcacag gaaacaccaa 240
cacattggct ggaatgtgcc acccaggcta 270

<210> 11
<211> 258
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (197), (203), (207) ... (208), (211), (214), (219), (223), (227),
(230), (234), (240), (244), (251), (255)
<223> unsure at all n locations

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ttcncccaaa ngggnttt 258

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 gccacaacag gcttggttcag agagcacatt cccttggtca gacttctctt ccctccattc 180
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 gttgtgagtg atccaagcct aacaaaatca 270

<210> 13
 <211> 262
 <212> nucleic acid
 <213> Glycine max
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<210> 14
 <211> 279
 <212> nucleic acid
 <213> Glycine max
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 <221> unsure
 <222> (71), (277)
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 gaagatgaag caggaaagag acttgctcag gttgtaagt atccaagcct aacaaaatct 180
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279

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<211> 346
<212> nucleic acid
<213> Glycine max

<400> 15

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ccctcatcga cttgcaaaaag ggaattccaa caaaaatttg gccctttgag gggttcagtca 240
gtggcaacaa caactccagg agtcaccaag gcttcaccag aaggcaagaa aactttgagg 300
aaaggcagtg ttattatcac tggggcttcc tctggattag gctggc 346

<210> 16
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 16

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ggcaacaaca actcca 256

<210> 17
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<212> nucleic acid
<213> Glycine max

<400> 17

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atgtttggtg tttcattgtc ggatactctc aaatctgact tcagctctcc ctcatcgact 180

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<222> (39), (318)
<223> unsure at all n locations

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<213> Glycine max

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<212> nucleic acid
<213> Glycine max

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ttcagtcagt ggcaac 256

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 ggttcagtca gtggca 256

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 <222> (169), (213), (241), (251), (254)
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taacatccta tcattttgaa tgcattgatg ttgttttggt agctaggagc ttctttgctt 360
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cgtaagatct gggagattag tgagaaactt gttggttttg cctaagtggg aggagcctcc 180
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<222> (209)
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acagcaaagt ctgcaatatg ctcaaatgc aagaattcca cagacgattc catgaggaaa 120
ctggaatcac atttgcttcc ctttaccocg gttgcattgc cacaacaggc ctgttcagag 180
agcacttccc ttgttcagaa actctgttnc cctcccatc cagaagtaca taaaccaaag 240
gctatgtctc cggaagatg 259

<210> 34
 <211> 176
 <212> nucleic acid
 <213> Glycine max
 <400> 34
 agcataatgc cacaaatgca gaatttcaca gacgattcca tgaggatact ggaatcacat 60
 ttgcttcctt ttaccccggt tgcattgccca caacaggcct gttcagagag cacattccct 120
 tgttcagaac tctgtccctc cattccagaa gtacataacc aaagggtat gtctca 176

<210> 35
 <211> 256
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (37)
 <223>
 <400> 35
 caggaaagag acttgcacag gttgtgagt atccacnccc taacaaaatc aggtgtttac 60
 tggagctgga acgcggcctc tgcttcgttt gaaaaccaat tgtcccaaga agccagcgat 120
 gcagataagg tgcgaagggt tgggagatta gtgagaaact tactggtttg gcttaagtgg 180
 tactttggca gttccaata tccatcttga tttagggaca tttgtcatgg agttcaataa 240
 catctcagaa gagttt 256

<210> 36
 <211> 248
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (76),(135)
 <223> unsure at all n locations
 <400> 36
 caggaaagag acttgcacag gttgtgagt atccaagcct aacaaaatca ggtgtttact 60
 ggagctggaa cgcggncctg ctgcttcgtt tgaaaaccaa ttgtgcccaa gaagccagcg 120

atgcagataa ggctncgcaa ggtttgggag attagtgaga aacttactgg tttgggctaa 180
gtgggtacttt ggcagcttcc caatatccat ctgatttagg gacattgtca ggagttcaat 240
aacatctc 248

<210> 37
<211> 335
<212> nucleic acid
<213> Glycine max

<400> 37

ggtgtgtctc tcaaggactc caccttggtc ggtctttcat tttcagaacc tatcaaagct 60
aacttcagct cttctgcatt gaggtgtcag aggggaattcg aacaaaagct ctgtgctgtg 120
agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc agaaggggaag 180
aaaacattga ggaagggcag tgttgtgata actggggctt catctggact aggcctggcc 240
actgctaagg ctttggctga gacgggaaaa tggcatgtaa taatggcctg cagggattac 300
ctcaaagctg caagagctgc aaaatccgct ggcat 335

<210> 38
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 38

cggaaaatgg catgtaataa tggcctgcag ggattacctc aaagctgcaa gagctgcaaa 60
atccgctggc atggctaagg aaaactacac catcatgcac taggaccttg cctcgctcga 120
cagtgtccgc caatttggtg ataacttcag aagatcgga atgccgttag atgtgctggt 180
ttgcaatgct gctgtttact tgccaactgc taaggaacct accttcactg ctgagggctt 240
tgaacttagt gttgggac 258

<210> 39
<211> 246
<212> nucleic acid
<213> Glycine max

<400> 39

aaacattgag gaagggcagt gtttgtgataa ctggggcttc atctggacta ggcttgcca 60

ctgctaaggc tttggctgag acgggaaaat ggcattgtaat aatggcctgc agggattacc 120
tcaaagctgc aagagctgca aaatccgctg gcatggctaa ggaaaactac accatcatgc 180
acttggacct tgccctgctc gacagtgtcc gccaatattgt tgataacttc agaagatcgg 240
aatgc 246

<210> 40
<211> 260
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (9)
<223>

<400> 40

ctgcaaganc tgcaaaatcc gctggcatgg ctaaggaaaa ctacaccatg aatgcacttg 60
gaccttgccct cgctcgacag tgtccgcaa tttgttgata acttcagaag atcagaaatg 120
ccgttagatg tgctggtttg ccatgctgct gtttacttgc caactgctaa ggaacctacc 180
ttcactgctg agggctttga acttagtggt gggacaaatc atctggggca tttcctctc 240
tcgcgcctgt tgcttgagga 260

<210> 41
<211> 278
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (49), (146)
<223> unsure at all n locations

<400> 41

atcttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggttna agaggggaatt 60
cgaacaaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 120
ccaagtctac accagaaggg aagaanacat tgaggaaggg cagtgttggtg ataactgggg 180
cttcactctgg actaggcctg gccactgcta aggctttggc tgagacggga aatggcatg 240
taataatggc ctgcagggat tacctcaaag ctgcaaga 278

<210> 42
 <211> 248
 <212> nucleic acid
 <213> Glycine max

<400> 42

ctgtgctgtg agggccgaaa cagtggctac agcctctcca gcagttacca agtctacacc 60
 agaagggaac gaaaacattg aggaaggga gtgttgatg aactggggct tcatctggac 120
 taggcctggc cactgctaag gctttggctg agacgggaaa atggcatgta ataatggcct 180
 gcagggatta cctcaaagct gcaagagctg caaaatccgc tggcatggct aaggaaaact 240
 acactgtc 248

<210> 43
 <211> 280
 <212> nucleic acid
 <213> Glycine max

<400> 43

gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat caaagctaac 60
 ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 120
 gccgaaacag tggctacagc cttccagcag ttaccaagtc tacaccagaa gggaagaaaa 180
 cattgaggaa gggcagtgtt gtgataactg gggcttcatc tggactaggc ctggccactg 240
 ctaaggcttt ggctgagacg ggaaaatggc atgtaataat 280

<210> 44
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<400> 44

aaagagtggg gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat 60
 caaagctaac ttcagctctt ctgcattgag gtgtaagagg gaattcgaac aaaagctctg 120
 tgctgtgagg gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga 180
 aggaagaaa acattgagga agggcagtgt tgtgataact ggggcttcat ctggactagg 240
 cctggccact gctaaggctt tggctgaga 269

<210> 45
 <211> 236
 <212> nucleic acid
 <213> Glycine max
 <400> 45
 cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggaagcaaac 60
 attgaggaag ggcagtgttg tgataactgg ggcttcatct ggactaggcc tggccactgc 120
 taaggctttg gctgagacgg gaaaatggca tgtaataatg gcctgcaggg attacctcaa 180
 agctgcaaga gctgcaaaat ccgctggcat ggctaaggaa aactacacca tcatgc 236

<210> 46
 <211> 211
 <212> nucleic acid
 <213> Glycine max
 <400> 46
 ctcgagcgtg cgagaagaga cagaaggggg aaaatggcat gtaataatgg cctgcagggg 60
 ttacctcaaa gctgcaagag ctgcaaaatc cgctggcatg gctaaggaaa actacaccat 120
 catgcacttg gaccttgctt cgctcgacag tgtccgcaa tttgttgata acttcagaag 180
 atcggaatg ccgtagatg tgctggtttg c 211

<210> 47
 <211> 276
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (185), (264)
 <223> unsure at all n locations

<400> 47
 ctttttttct tcttcttgaa atggctctcc aggetgcttc tctgttctt gcttctttct 60
 cggttcttaa agaggggaaag agtgggtgtg ctctcaagga ctccaccttg ttcggtcttt 120
 cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc aagaggggaat 180
 tcgancaaaa gctctgtgct gtgagggccg aaacagtggc tacagcctct ccagcagtta 240
 ccaagtctac accagaaggg aagnaacat tgagga 276

<210> 48
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<400> 48

cttctcttgt tcttgccttct ttctcgggtc ttaaagaggg aaagagtggg gtgtctctca 60
 aggactccac cttgttcggg ctttcatttt cagaacctat caaagctaac ttcagctctt 120
 ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg gccgaaacag 180
 tggctacagc ctctccagca gttaccaagt ctacaccaga agggaagaaa acattgagga 240
 agggcagtgt tgtgataact ggggcttca 269

<210> 49
 <211> 279
 <212> nucleic acid
 <213> Glycine max

<400> 49

tagtcaaaat ctagtttcat acttttggtc ttcttcttga aatggctctc caggctgctt 60
 ctcttggtcc tgcttcttcc tcgggtctta aagagggaaa gagtgggtgtg tctctcaagg 120
 attccacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc agctcttctg 180
 cattgaggtg caagagggaa ttcgaacaaa agctctgtgc tgtgagggcc gaaacagtgg 240
 ctacagcctc tccagcagtt accaagtcta caccagaag 279

<210> 50
 <211> 257
 <212> nucleic acid
 <213> Glycine max

<400> 50

ttctcttgtt cctgcttctt tctcgggtct taaagagggg aaagagtggg tgtctctcaa 60
 ggactccacc ttgttcgggc tttcattttc agaacctatc aaagctaact tcagctcttc 120
 tgcattgagg ttcaagaggg aattcgaaca aaagctctgt gctgtgaggg ccgaaacagt 180
 ggctacagcc tctccagcag ttaccaagtc tacaccagaa gggaagataa cattgaggaa 240
 gggcagtgtt gtgataa 257

<210> 51
 <211> 243
 <212> nucleic acid
 <213> Glycine max
 <400> 51
 ggctgcttct cttgttcctg cttctttctc ggttcttaaa gagggaaaga gtggtgtgtc 60
 tctcaaggac tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag 120
 ctctttctgca ttgaggtgca agaggggaatt cgaacaaaag ctctgtgctg tgagggccga 180
 aacagtggct acagcctctc cagcagttac caagtctaca ccagaaggga agaaaacatt 240
 gag 243

<210> 52
 <211> 277
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (201), (228)
 <223> unsure at all n locations
 <400> 52
 caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60
 ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120
 gtctctcaag gactccacct tggtcggctt ttcattttca gaacctatca aagctaactt 180
 cagctcttct gcattgaggt ncaagaggga attcgaacaa aagctctntg ctgtgagggc 240
 cgaaacagtg gctacagcct ctccagcagt taccaag 277

<210> 53
 <211> 271
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (46), (193), (261)... (262)
 <223> unsure at all n locations
 <400> 53

ctttttttct tcttcttgaa tggtcttcca ggctgcttct cttgancctg cttccttctc 60
 ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtcttctc 120
 attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgagggttaa gagggaattc 180
 gaacaaaagc tcngtgctgt gagggccgaa acagtggcta cagcctctcc agcagttacc 240
 aagtctacac cagaaggcaa nnaacattga g 271

<210> 54
 <211> 269
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (2), (255)
 <223> unsure at all n locations

<400> 54
 cnatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60
 ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120
 gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180
 cagctcttct gcattgaggt ccaagaggga attcgaacaa aagctctgtg ctgtgagggc 240
 cgaaacagtg gctanagcct ctccagcag 269

<210> 55
 <211> 282
 <212> nucleic acid
 <213> Glycine max

<400> 55
 tcaaaatcta gtttcatact tttcatcttc ttcttgaaat ggctctccag gctgcttctc 60
 ttgttcctga ttctttctcg gttcttaaag acggtgagat gtggtgtgtc tctcaaggac 120
 tccacctagt tcggtctggc attttcagaa cctatcaaag ctaacttaag ctcttctgca 180
 ttgagggtgca agagggattc cgcacaaaag ctctgtgctg tgagtgccga gacagtggct 240
 acagcgtctg cagcagttac caagtetaca cgagaaggga ag 282

<210> 56

<211> 263
<212> nucleic acid
<213> Glycine max

<400> 56

acttctcttg ttctgcttc tttctcggtt cttaaagagg gacagagtgg tgtgtctctc 60
aaggactccg cttgttcggt ctttcatttt cagaacctat caaagctaac ttcagctctt 120
ctgcattgag gtgcaagagg gaattcgaac aatcgctctg tgctgtgagg gccgaaacag 180
tggttacagc ctctccagca gttaccaagt ctacaccaga tgggaagaaa acattgagtg 240
aaggagtgtg gtgaaactgg ggc 263

<210> 57
<211> 313
<212> nucleic acid
<213> Glycine max

<400> 57

gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct taaagagggg 60
aagagtgggtg tgtctctcaa ggactccacc ttgttcggtc tttcattttc agaacctatc 120
aaagctaact tcagctcttc tgcattgagg tgcaagaggg aattcgaaca aaagctctgt 180
gctgtgaggg ccgaaacagt ggctacagcc tctccagcag ttaccaagtc tacaccagaa 240
ggcaagaaaa cattgaggaa gggcagtgtt gtgataactg gggcttcctc tggacgaggc 300
ctggccactg cta 313

<210> 58
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 58

ccgtgataac aactaacac caccacttca tcaactttac ttgacaacaa tattgtaaaa 60
ctcaaaatct agtttcatac ttttgttctt cttcttgaaa tggctctcca ggctgcttct 120
cttgttcctg cttctttctc ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac 180
tccaccttgt tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca 240
ttgaggtgca agaggaatt cgaaca 266

<210> 59
 <211> 277
 <212> nucleic acid
 <213> Glycine max
 <400> 59
 caccatcact tcatcaactt tacttgacaa caatattgta aaactcaaaa tctagtttca 60
 tactttttttt cttctttcttg aaatggctct ccaggctgct tctcttggtc ctgcttcttt 120
 ctcggttctt aaagagggaa agagtgggtgt gtctctcaag gactccacct tgttcggtct 180
 ttcatttttca gaacctatca aagctaactt cagctcttct gcattgaggt gcaagagggga 240
 attcgaacaa aagctctgtg ctgtgagggc cgaaaca 277

<210> 60
 <211> 151
 <212> nucleic acid
 <213> Glycine max
 <400> 60
 gcatctttct cggttcttaa agagggaag actggtgtgt cactcacgga ttccaccttg 60
 tacggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggtgc 120
 aagaggggaat tcgaacaaaa actctgtgct g 151

<210> 61
 <211> 266
 <212> nucleic acid
 <213> Glycine max
 <400> 61
 caccacttca tcaactttac ttgacaacaa tattgtaaaa ctcaaatct agtttcatac 60
 ttttttttact cttcttgaaa tggctctcca ggctgcttct cttgttcctg cttctttctc 120
 ggttcttaaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt tcggtctttc 180
 attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca agaggggaatt 240
 cgaacaaaag ctctgtgctg tgaggg 266

<210> 62
 <211> 229
 <212> nucleic acid

<213> Glycine max

<400> 62

ttcatcaact ttacttgaca acaatattgt aaaactcaaa atctagtttc atactttttt 60
tcttcttctt gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct 120
taaagaggga aagagtgggtg tgtctctcaa ggactccacc ttgttcgggtc tttcattttc 180
agaacctatc aaagctaact tcagctcttc tgcattgagg tgcaagagg 229

<210> 63

<211> 268

<212> nucleic acid

<213> Glycine max

<400> 63

cccgtgataa cacactaaca ccatcacttc atcaacttta cttgacaaca atattgtaaa 60
actcaaaatc tagtttcata cttttattcg tcttctttaa atggctctcc aggctgcttc 120
tcttgttcct gcttctttct cggttcttaa atagggaag agtggtgtgt ctctcaagga 180
ctccaccttg ttcggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc 240
attgaggttc aagaggggaat tcgaacaa 268

<210> 64

<211> 278

<212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> (4), (23), (26), (50)... (51), (234)

<223> unsure at all n locations

<400> 64

tatnatacca cttcatcaac ctnacnctga caacaatatt gtaaaactcn naatctagtt 60
tcatactttt tttcttcttc ttgaaatggc tctccaggt gcttctcttg ttcctgcttc 120
tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttggtcgg 180
tctttcattt tcagaacctc tcaaagctaa cttcagctct tctgcattga ggtntcaaga 240
gggaattcga acaaaagctc tgtgctgtga gggccgaa 278

<210> 65
 <211> 275
 <212> nucleic acid
 <213> Glycine max
 <400> 65
 ttcatcaact ttacttgaca acaatattgt aaaattcaaa atctagtttc atacttttat 60
 tttttttctt gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct 120
 taaagagggga aagagtgggtg tgtctctcaa ggactccacc ttgttcgggc tttcattttc 180
 agaacctatc aaagctaact tcagctcttc tgcattgagg tttaagaggg aattcgaaca 240
 aaagctctgt gctgtgaggg ccgaaacagt ggcta 275

<210> 66
 <211> 344
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (11)
 <223>
 <400> 66
 caatattgta naactcaaaa tctagtttca tacttttctt ctacttcttg aaatggctct 60
 ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120
 gtttctcaag gactccacct tgttcgggtc ttcattttca gaacctttta tagctaactt 180
 cagctcttct gcattgaggt gtaagagggga attcgaacaa aagctctgtg ctgtgagggc 240
 cgaaacagtg gctacagcct ctccagcagt taccaagtct acaccagaag ggacgtcaac 300
 attgaggaag ggcagtgttg tgataactgg ggcttcatct ggac 344

<210> 67
 <211> 255
 <212> nucleic acid
 <213> Glycine max
 <400> 67
 cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60
 aactcaaaat ctagtttcat actttttttc ttcttcttga aatggctctc caggctgctt 120

ctcttggtcc tgattcttac tcggttctta aagagggaaa gagtggtgtg tctctcaag 180
actccacott gttcgggtctt tcattttcag aacctatcaa agctaacttc agctcttctg 240
cattgaggtg caaga 255

<210> 68
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 68

ttttcattac cgccgtgata acacactaac accaccactt catcaacttt acttgacaac 60
aatattgtaa aactcaaaaat ctagtttcat actttttttc ttcttcttga aatggctctc 120
caggtgtgctt ctcttggtcc tgcttctttc tcggttctta aagagggaaa gagtggtgtg 180
tctctcaagg actccacott gttcgggtctt tcattttcag aacctatcaa agctaacttc 240
agctcttct 249

<210> 69
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 69

cacactaaca ccaccacttc atcaacttta ctgacaaca atattgtaaa actcaaaaac 60
tagtttcata ctttttttct tcttcttgaa atggctctcc aggctgcttc tcttggtcct 120
gcttctttct cggttcttaa agagggaaa agtggtgtgt ctctcaagga ctccacottg 180
ttcgggtcttt cattttcaga acctatcaaa gctaacttca gctcttctgc attgaggttc 240
aagagggaa 249

<210> 70
<211> 294
<212> nucleic acid
<213> Glycine max

<400> 70

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60
ccaggctgct tctcttggtc ctgcttcttt ctggttctt aaagagggaa agagtgggtg 120

gtctctcaag gactccacct tgttcggtct ttcattttca gaacctatca aagctaactt 180
 cagctcttct gcattgaggt gcaagagggg attcgaacaa aagctctgtg ctgtgagggc 240
 cgaaacagt gctacagcct ctccagcagt taccaagtct acaccagaag ggaa 294

<210> 71
 <211> 270
 <212> nucleic acid
 <213> Glycine max

<400> 71

ctccaggctg cttctcttgt tcctgcttct ttctcggttc tttaaagagg aaagagtgg 60
 gtgtctctca aggactccac cttgttcggt ctttcatttt cagaacctat caaagctaac 120
 ttcagctctt ctgcattgag gtgcaagagg gaattcgaac aaaagctctg tgctgtgagg 180
 gccgaaacag tggctacagc ctctccagca gttaccaagt ctacaccaga aggcaagata 240
 acattgagaa gggcagtgtt gtgataactg 270

<210> 72
 <211> 254
 <212> nucleic acid
 <213> Glycine max

<400> 72

attaccgccg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60
 tgtaaaactc aaaatctagt ttcatacttt ttttcttctt cttgaaaggc tctccaggct 120
 gcttctcttg ttctgcttc tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc 180
 aaggactcca cttgttcgg tctttcattt tcagaacctc agctaacttc agctcttctg 240
 cattgaggtg caag 254

<210> 73
 <211> 100
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (79)
 <223>

<400> 73

ccctgcaggc cattattaca aagctgcaag agctgcaaaa tccgctggca tggctaagga 60
aaactacacc atcatgcanc ttggaccttg cctcgctcga 100

<210> 74
<211> 262
<212> nucleic acid
<213> Glycine max

<400> 74

cgccgtgata acacactaac accaccactt catcaacttt acttgacaac aatattgtaa 60
aactcaaaat ctagtttcat actttttttc ttctttctga aatggctctc caggctgctt 120
ctcttggtcc gcttctttct cggttcttaa agagggaag agtgggtgtgt ctctcaagga 180
ctccaccttg ttgggtcttt cattttcaga acctatcaaa gctaacttca tcttctgcat 240
tgaggtgcaa gagggaattc ga 262

<210> 75
<211> 184
<212> nucleic acid
<213> Glycine max

<400> 75

gtgataacac actaacacca ccacttcac aactttactt gacaacaata ttgtaaaact 60
caaaatctag ttccatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 120
tgttctgct tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc 180
cacc 184

<210> 76
<211> 229
<212> nucleic acid
<213> Glycine max

<400> 76

ggaaccacac atttttcatt accgccgtga taacacacta acaccaccac ttcatcaact 60
ttacttgaca acaatattgt aaaactcaaa atctgggttc atactttttt tcttcttctt 120
gaaatggctc tccaggctgc ttctcttggt cctgcttctt tctcggttct taaagaggga 180
aagagtgggtg tgtctctcaa ggactccacc ttgttcggtc tttcatttt 229

<210> 77
 <211> 270
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (81)...(103),(225),(252),(254),(259),(263)
 <223> unsure at all n locations

<400> 77

attaccgtcg tgataacaca ctaacaccac cacttcatca actttacttg acaacaatat 60
 tgtaaaactc aaaatctagt nnnnnnnnnn nnnnnnnnnn nnngaaatgg ctctccaggc 120
 tgcttctctt gttcctgctt ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct 180
 caaggactcc accttggtcg gtctttcatt ttcagaacct atcanagcta acttcagctc 240
 ttctgcatga gngntagang gantcgaaca 270

<210> 78
 <211> 267
 <212> nucleic acid
 <213> Glycine max

<400> 78

ggctgcgaga agacgacaga aggggaacca cacatttttc attaccgccg tgataacaca 60
 ctaacaccac cacttcatca actttacttg acaacaatat tgtaaaactc aaaatctagt 120
 ttcatacttt ttttcttctt cttgaaatgg ctctccaggc tgcttctctt gttcctgctt 180
 ctttctcggt tcttaaagag ggaaagagtg gtgtgtctct caaggactcc accttggtcg 240
 gtctttcatt ttcagaacct atcaaag 267

<210> 79
 <211> 158
 <212> nucleic acid
 <213> Glycine max

<400> 79

tcaaaatcta gtttcatact tttttcttc ttcttgaaat ggctctccag gctgcttctc 60
 ttgttctgc ttctttctcg gttcttaaag agggaaagag tggtgtgtct ctcaaggact 120

ccaccttggt cggtctttca ttttcagaac ctatcaaa 158

<210> 80
 <211> 278
 <212> nucleic acid
 <213> Glycine max

<400> 80

cacactaaca ccaccacttc atcaacttta cttgacaaca atattgtaaa actcaaaatc 60
 tagtttcata ctttttttct tcttcttgaa atggctctcc aggtctgttc tcttgttcct 120
 gcttctttct cggttcttaa gagggaaaga gtggtgtgtc tctcaaggac tccaccttgt 180
 tcggtctttc attttcagaa cctatcaaag ctaacttcag ctcttctgca ttgaggtgca 240
 agagggaatt cgaacaaaag ctctgtgctg tgagggcc 278

<210> 81
 <211> 285
 <212> nucleic acid
 <213> Glycine max

<400> 81

cacggctgcg aaagacgaca gaaggggacc acacattttt cattaccgcc gtgataacac 60
 actaacacca ccagctcatc aactttactt gacaacaata ttgtaaaact caaaatctag 120
 tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct tgttcctgct 180
 tctttctcgg ttcttaaaga gggaaagagt ggtgtgtctc tcaaggactc caccttggtc 240
 ggtctttcat tttcagaact atcaaagcta attcagctct tctgc 285

<210> 82
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<400> 82

ggttaccatt atttctttat aactatacta ctcatcagct gcatgggtatt tttgctttca 60
 ttgttggtgt tgttggtgat ccacttcato aactttactt gacaacaaga ttgtaaaact 120
 caaaatctag tttcatactt tttttcttct tcttgaaatg gctctccagg ctgcttctct 180
 tgttcctgct tctttctcgg ttcttaaage gggcaagagt ggtgtgtctc tcaaggactc 240

caccttggtc ggtctttcat tttcagaac

269

<210> 83
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 83

acggcgagaa gacgacagaa ggggaaccac acatttttca ttaccgccgt gataacacac 60
taacaccacc acttcatcaa ctttacttga caacaatatt gtaaaactca aaatctagtt 120
tcatactttt tttcttcttc ttgaaatggc tctccaggct gcttctcttg ttctgcttc 180
tttctcggtt cttaaagagg gaaagagtgg tgtgtctctc aaggactcca ccttggtcgg 240
tctttcattt tcagaaccta 260

<210> 84
<211> 108
<212> nucleic acid
<213> Glycine max

<400> 84

ttcagctctg ctgcattgag gtgccagagg gaattcgaac aaaagctctg tgctgtgagg 60
gccgaaacag tggctacagc ctctccagca gttaccaagt ctacacca 108

<210> 85
<211> 258
<212> nucleic acid
<213> Glycine max

<400> 85

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60
ccaggctgcc tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120
gtctctcaag gactcacctt gttcgggtctt tcattttcag aacctatcaa agctaacttc 180
agctcttctg cattgaggtg taagagggaa ttcgaacaaa agctctgtgc tgtgagggcc 240
gaaacagtgg ctacagcc 258

<210> 86
<211> 250
<212> nucleic acid

<213> Glycine max

<400> 86

caatattgta aaactcaaaa tctagtttca tacttttttt cttcttcttg aaatggctct 60
ccaggctgct tctcttggtc ctgcttcttt ctcggttctt aaagagggaa agagtgggtg 120
gtctctcaag gctccacctt gttcggctctt tcattttcag aacctatcaa agctaacttc 180
agctcttctg cattgagggtg caagagggaa ttcgaacaaa agctctgtgc tgtgaggcga 240
aacagtggct 250

<210> 87

<211> 260

<212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> (81), (212)... (213)

<223> unsure at all n locations

<400> 87

caaaaatttg gccctttgag ggttcagtca gtggcaacaa caactccagg agtcaccaag 60
gcttcaccag aaggcaagaa nactttgagg aaaggcagtg ttattatcac tggggcttcc 120
tctggattag gcctggccac tgctaaggct ttggctgaga caggaaagtg gcatgtgata 180
atggcctgcc gggatttcct caaagccgaa anngctgcga aatctgccgg cattgctaag 240
gaaaactaca ctattatgca 260

<210> 88

<211> 281

<212> nucleic acid

<213> Glycine max

<400> 88

caacaaaaaa ttggcccttt gagggttcag tcagtggcaa caaccactcc aggagtcacc 60
aaggcttcac cagaaggcaa gaaaactttg aggaaaggca gtgttattgt cactgggctt 120
cctctggatt aggctggcc acggccaagg ctttggctga gacaggaaag tggcatgtga 180
ttatgcactg cagggatttc ctcaaagctg agagggctgc aaaatctgct ggcattgcta 240
aggaaattgt gtctcttgat agtgtgaggc aatttgtgga t 281

<210> 89
 <211> 385
 <212> nucleic acid
 <213> Glycine max

<400> 89

ctttgaactt agtgttgggc caaataattt gggcgttttc gtctctctcg cctgttgctt 60
 gaggacttgg aaaaatccga ttacccttca aagcgcttga tcatcgttgg ttcaatatca 120
 cggaacacac acacattggc tggtaatgta cctcccaagg ctaaccttgg tgacttgagg 180
 ggacttcaag gtggtttgaa tgggcttaac agctcagcca tgattgatgg tggagacttc 240
 gatggtgcc aaggcgtacaa ggacagcaaa gtctgcaata tgctcacaat gcaagaattc 300
 cacagacgat ttcattgagga aaactgaatc acatttgctt tcctttaacc ccggtgcatt 360
 gccacaacag gcctgttcag agagc 385

<210> 90
 <211> 241
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (223)
 <223>

<400> 90

gataacttca gaagatcgga aatgccgtta gatgtgctgg ttgcaatgc tgctgtttac 60
 ttgccaactg ctaaggaacc taccttcaact gctgagggct ttgaacttag tgttgggaca 120
 aatcatctgg ggcatttcct cctctcgcgc ctgttgcttg aggacttgga aaaatccgat 180
 tacccttcaa agcgcttgat catcgttggt tcaataacag ggnacacaaa cacattggct 240
 g 241

<210> 91
 <211> 267
 <212> nucleic acid
 <213> Glycine max

<400> 91

ctcctctcgc gcctgttgct tgaggacttg gaaaaatccg attacccttc aaagcgcttg 60
 atcatcgcttg gttcaataac aggggaacaca aacacattgg ctggtaatgt acctcccaag 120
 gctaacccttg gtgacttgag gggacttcag ggtgggtttga atgggctaaa cagctcagcc 180
 atgattgatg gtggagagat cgatgggtgcc aaggcgctaca aggacagcaa agtctgcaat 240
 atgctcacao tgcaagaatt ccacaga 267

<210> 92
 <211> 256
 <212> nucleic acid
 <213> Glycine max

<400> 92

ttagatgtgc tggtttgcaa tgctgctgtt tacttgccaa ctgctaagga acctacccttc 60
 actgctgagg gctttgaact tagtgctggg acaaatcatc tggggcattt cctcctctcg 120
 cgcctgttgc ttgaggactt ggaaaaatcc gattaccctt caaagcgctt gatcatcgct 180
 ggttcaataa cagggaacac aaacacattg gctggtaatg tacctcccaa ggctaaccctt 240
 ggtgacttga ggggat 256

<210> 93
 <211> 260
 <212> nucleic acid
 <213> Glycine max

<400> 93

cttcactgct gagggctttg aacttagtgt tgggacaaat catctggggc atttcctcct 60
 ctcgcgcctg ttgcttgagg acttggaata atccgattac cttcaaagc gcttgatcat 120
 cgttggttca ataacaggga acacaaacac attggctggg aatgtacctc ccaaggctaa 180
 ccttggtgac ttgaggggac ttcaggggtgg tttgaatggg ctaaacagct cagccatgat 240
 tgatggtgga gattcgatgg 260

<210> 94
 <211> 274
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure

<222> (2), (27), (32), (37), (39)
 <223> unsure at all n locations

<400> 94

cntaccttca ctgctgaggg ctttganctt antgttngng acaaattcat ctggggcatt 60
 tctctctctc gcgcctgttg cttgaggact tggaaaaatc cgattaccct tcaaagcgct 120
 tgatcatcgt tggttcaata acagggaaca caaacacatt ggctggtaat gtactcccaa 180
 ggctaacctt ggtgacttga ggggacttca ggggtggttg aatgggctaa acagctcagc 240
 catgattgat ggtggagatt cgatggtgcc aagc 274

<210> 95
 <211> 284
 <212> nucleic acid
 <213> Glycine max

<400> 95

cagtattgtg aaatgttgaa agcagacgag tggcctgttt gtgcatttat ttctcaagat 60
 tgtcgtccag caaatccatc ggaagaagcg cacaatgttc aaacatcgta tgaagtgtgg 120
 gagaagacat tagagatgat tggccttccc tcagatgctg tggaaaggct tttagatggg 180
 gaagaagtta aatgccgtta tggacaagaa cagtaatcta atatacaata tctcccttaa 240
 tctgtaaggg cacttccatt atttatagct agtaatgagc attt 284

<210> 96
 <211> 265
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (41), (85)
 <223> unsure at all n locations

<400> 96

aagagagaga tggcaacgac gacgtcgtct tcaagcgagg nagcaccgaa cactaagaag 60
 aacaagaagg agcgtttagg ttgntagaa tggttaagag gttggttcta tttggtctac 120
 gaaatgctct ttcagcgcac catggcgagc cacttgcaca accctatgcc tctccctcct 180
 gtaaacgacc tcaattgcat tgtcaccggc tccaccagcg gcattggcct cgaaattgct 240


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<210>      100
<211>      264
<212>      nucleic acid
<213>      Glycine max

<220>
<221>      unsure
<222>      (47),(62)
<223>      unsure at all n locations

<400>      100

aattgcgaag gggacgatat gttgaattca atttgggtata tgatagnggt acaacatttg   60
gncTGaaaac tggaggggaga atagagagta tacttgtttc tctccactg actgctcggt   120
gggaatacga tcataaaccg gaagaaggaa gcgaagaatg gaaactcttg gacgcatgca   180
tcaaccccaa ggaatggatc taattcatca gttgaccccc caatttgtca gctttttaat   240
ttaataataa gggagcttgt ttct                                           264

<210>      101
<211>      249
<212>      nucleic acid
<213>      Glycine max

<400>      101

ctcccttatt attaaattaa aaagctgaca aattgggggg tcaactgatg aattagatcc   60
attccttggg gttgatgcat gcgtccaaga gtttccattc ttcgcttctt tcttccggtt   120
tatgatcgta ttcccaccga gcagtcagtg ggagagaaac aagtatactc tctattctcc   180
ctccagtttt cagtccaaat gttgtacccc tatcatatac caaattgaat tcaacatatac   240
gtccccttc                                           249

<210>      102
<211>      262
<212>      nucleic acid
<213>      Glycine max

<400>      102

ggagatgctc ctttcctttg ctactgaatg tgcaaattct gttattcctg cttatttacc   60
tatcatagag aaaaggaagg atttgccctt caatgatcat cagaaagcat ggcaacaatt   120
gcgaagggga cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact   180

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gaaaactgga gggagaatag agagtatact tgtttctctc ccactgactg ctcggtggga 240
 atacgatcaa aaccggaaga ag 262

<210> 103
 <211> 240
 <212> nucleic acid
 <213> Glycine max

<400> 103

agatgctcct ttcctttgct actgaatgtg caaattctgt tattcctgct tatttaccta 60
 tcatagagaa aaggaaggat ttgcccttca atgatcatca gaaagcatgg caacaattgc 120
 gaaggggacg atatgttgaa ttcaatttgg tatatgatag gggtagaaca tttggactga 180
 aaactggagg gagaatagag agtatacttg tttctctccc actgactgct cggtagggaat 240

<210> 104
 <211> 249
 <212> nucleic acid
 <213> Glycine max

<400> 104

acggctgcga gaagacgaca gaaggggatg atcttaatga ctatgatcag gagatgctcc 60
 tttcctttgc tactgaatgt gcaaattctg ttattcctgc ttatttacct atcatagaga 120
 aaaggaagga tttgcccttc aatgatcatc agaaagcatg gcaacatttg cgaacgggga 180
 cgatatgttg aattcaattt ggtatatgat aggggtacaa catttggact gaaaactgga 240
 gggagaata 249

<210> 105
 <211> 250
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (8), (15), (22), (28), (34), (39), (43), (46) ... (47), (57), (69),
 (106), (136), (143), (147), (163), (173), (183)
 <223> unsure at all n locations

<400> 105

aattgcgnag gggangatat gntgaatnca attnggtana tgntannnggt acaacanttg 60

gactgaatnc tggaggggag aatagagagt atacttgttt ctctcncact gactgctcgg 120
 tgggaatacg atcatnaacc ggnagangga agcgaagact ggnaactctt ggnccgcatgc 180
 atnaacccca aggaatggat ctaattcatc agttgacccc ccaatttgtc agcttttttaa 240
 ttttaataata 250

<210> 106
 <211> 268
 <212> nucleic acid
 <213> Glycine max
 <400> 106

ggatttgccc ttcaatgata atcagaaagc atggcaacaa ttgcgaaggg gacgatatgt 60
 tgaattcaat ttggtatatg ataggggtac aacatttgga ctgaaaactg gagggagaat 120
 agagagtata cttgtttctc tcccactgac tgctcggtgg gaatacgatc ataaaccgga 180
 agaaggaagc gaagaatgga aactcttgga cgcatgcata aaccccaagg aatggatcta 240
 attcatcagt tgacccccca atttgtca 268

<210> 107
 <211> 268
 <212> nucleic acid
 <213> Glycine max
 <400> 107

acggctgcga gaagacgaca gaaggggaga aaaggaagga ttgccccttc aatgatcatc 60
 agaaagcatg gcaacaattg cgaaggggac gatatgttga attcaatttg gtatatgata 120
 ggggtacaac atttgactg aaaactggag ggagaataga gagtatactt gtttctctcc 180
 cactgactgc tcggtgggaa tacgatcata aaccggaaga aggaagcgaa gaatggaaac 240
 tcttgacgc atgcatcaac cccaagga 268

<210> 108
 <211> 321
 <212> nucleic acid
 <213> Glycine max
 <400> 108

ggaagacctt atcatctccg aatttcattt tcagaagcct ctttggaat caaatccgaa 60

gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttcctt tttctctctg 120
gctccgcttc cactactcca actgcatctt cgctcactaa gcgcagttgg aagccacctc 180
cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag accccggagg 240
ccaatcgccc cgaaacgttt ctcataggag tggacgaggc ccagtcttcc acttcgggtc 300
gggcccgcctt cgagaagatg a 321

<210> 109
<211> 282
<212> nucleic acid
<213> Glycine max

<400> 109

cacatccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttcctt 60
tttctctctg gctccgcttc cactactcca actgcatctt cgctcactaa gcgcagttgg 120
aagccacctc cgagcatggc aaaaggccca gtcagagcca ccgtttctat agagaaagag 180
accccgaggc ccaatcgccc cgaaacgttt ctcataggag tggacgaggc ccagtcttcc 240
acttcgggtc gggcccgcctt tcgagaagat gataagggac gc 282

<210> 110
<211> 260
<212> nucleic acid
<213> Glycine max

<400> 110

ccttatcatc tccgaatttc attttcagaa gcctcttttg gaatcaaata cgaagcatga 60
tgcatgtgtc gagcattgtc tcggtccgtt cctacgcgtt cccttttctc tctggctccg 120
cttcactac tccaactgag atctcgctca ctaagcgcag ttggaagcca cctccgagca 180
tggcaaaagg ccagtcaga gccaccgttt ctatagagaa agagaccccg gaggccaata 240
gtcccgaaac gtttctcaga 260

<210> 111
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 111

ctctttggga atcaaatacg aagcatgatg cattgtgcga gcattgtctc ggctccgtcc 60
 tacgcgttcc cttttctctc tggctccgct tccactactc caactgcgat ctgcgtcact 120
 aagcgcagtt ggaagccacc tccgagcatg gcaaaaggcc cagtcagagc cacgtttcta 180
 tagagaaaga taccgccgag gccaatcgtc ccgaaacggt tctcagagga gtggacgagg 240
 cccagtcttc cacttcggtt cgggcccgc 269

<210> 112
 <211> 260
 <212> nucleic acid
 <213> Glycine max
 <400> 112

tgtgcgagca ttgtctcggc tccgtcctac gcgttccctt ttctctctgg ctccgcttcc 60
 actactccaa ctgcgtcttc gctcactaag cgagttgga agccacctcc gagcatggca 120
 aaaggcccag tcagagccac cgtttctata gagaaagaga ccccgagggc caatcgcccc 180
 gaaacgtttc tcagaggagt ggacgaggcc cagtcttcca cttcggttcg ggcccgttc 240
 gagaagatga taagggaggc 260

<210> 113
 <211> 279
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (26), (35), (52) ... (53), (57) ... (59), (74), (81), (148),
 (186)
 <223> unsure at all n locations
 <400> 113

gaagacttta tcatttccga atttctttt cagangcctc tttgggaatc anntccnnng 60
 catgatgcat tgtngcgagc nttgtctacg gctccgtcct acgcgttccc ttttcgctct 120
 ggctccgctt ccaactactcc aactgcgntc tcgctcacta agcgcagttg gaagccacct 180
 ccgagnatgg caaaaggccc agtcagagcc accgtttcta tagagaaaga gaccccgag 240
 gccaatcgtc ccgaaacggt tctcagagga gtggacgag 279

<210> 114

<211> 247
 <212> nucleic acid
 <213> Glycine max

<400> 114

ctccgaattt cattttcaga agcctctttg ggaatcaaat tggagtgtct gcaatccact 60
 ccgaagcatg atgcattgtg cgagcattgt ctgggctccg tctacgcgt tcccttttcg 120
 ctctggctcc gctctccact actccaactg cgatctcgct ctctaagcgc agttggaagc 180
 cacctccgag catggcaaaa gccagtcag agccaccgtt tctatagaga aagagacccc 240
 ggaggcc 247

<210> 115
 <211> 253
 <212> nucleic acid
 <213> Glycine max

<400> 115

cagaagcctc tttgggaatc aaatccgaag catgatgcat tgtgcgagca ttgtctcggc 60
 tccgtcctac gcgttccctt ttctctctgg ctccgcttcc actactccaa ctgccctctc 120
 gctcactacg cgcagttgga agccacctcc gagcatggca aaaggcccag tcagagccac 180
 cgtttctata gagatagaga ccccgagggc caatcgctcc gaaacgtttc tcagaggagt 240
 ggacgaggcc cag 253

<210> 116
 <211> 268
 <212> nucleic acid
 <213> Glycine max

<400> 116

tcgagcgcgt tcccttttct ctctggctcc gcttccacta ctccacatgc gctctcgctc 60
 actaagcgca gttggaagcc acctccgagc atggcaaaag gccagtcag agccaccgtt 120
 tctatagaga aagagacccc ggaggccaat cgtcccgaag cgtttctcag aggagtcgtc 180
 gaggcccagt cttccacttc ggttcgggccc cgcttcgaga agatgataag ggaggcccag 240
 gacaccgtgt gcagtgcctt cgaggccg 268

<210> 117

<211> 238
 <212> nucleic acid
 <213> Glycine max

<400> 117

atccgaagca tgatgcattg tgcgagcatt gtctcggctc cgctctacgc gttccctttt 60
 ctctctggct ccgcttccac tactccaact gcgatctcgc tctaagcgc cagttggaag 120
 ccacctccga gcatggcaaa aggccagtc agagccaccg tttctataga gaaagacacc 180
 ccggaggcca atggtccga aacgtttctc agaggagtgg acgaggcca ttctcca 238

<210> 118
 <211> 250
 <212> nucleic acid
 <213> Glycine max

<400> 118

tccgaagcat gatgcattgt gcgagcattg tctcggctcc gtctacgcg ttcccttttc 60
 tctctggctc cgcttccact actccaactg ccctctcgt cactaagcgc agttggaagc 120
 cacctccgag catggcaaaa ggaccagtca gagccaccgt ttctacagag acagagaccc 180
 cggaggccaa tcgtcccgaa acgtttctca gaggagtgga cgaggccaag tcttccactt 240
 cggttcgggc 250

<210> 119
 <211> 267
 <212> nucleic acid
 <213> Glycine max

<400> 119

actcgagccg attcggctcg agctcttttg gaatcaaata cgaaacatga tgcattgtgc 60
 gaccattgtc tcggctccgt cactacgcgt tcccttttct ctctggctcc gcttccacta 120
 ctccaactac tactctcgt cactaagcgc agttggaagc cacctccgag catggcaaaa 180
 ggcccagtca gagccaccgt ttctatagag acagacaccc cggaagccaa ttctcccgaa 240
 acgtttctca gacgactgga cgaggcc 267

<210> 120
 <211> 119
 <212> nucleic acid

<213> Glycine max
 <400> 120
 tcattttcag aagcctcttt gggaatcaaa tccgaagcat gatgcattac gcgagcattg 60
 tctcggtcc gtcctacgcg ttcccttttc tctctggctc cgcttccaca caacatacg 119

<210> 121
 <211> 117
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (56)
 <223>

<400> 121
 cgaatttcat ttccagaagc ctctttggga atcaaattccg aagcatgatg cattgngcga 60
 gcattgtctc ggctccgtcc tacgcgttcc cttttctctc tggctccgct tccacaa 117

<210> 122
 <211> 94
 <212> nucleic acid
 <213> Glycine max

<400> 122
 caaatccgaa gcatgatgca ttgtgcgagc attgtctcgg ctccgtccta cgcgttccct 60
 tttctctctg gctccgcttc cacacaacat acga 94

<210> 123
 <211> 81
 <212> nucleic acid
 <213> Glycine max

<400> 123
 cattttcaga agcctctttg ggaatcaaatt ccgaagcatg atgcattgtg cgagcattgt 60
 ctcggtccg tcctacgcgt t 81

<210> 124
 <211> 246
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (23), (78)
 <223> unsure at all n locations

<400> 124

cgagacccgg aggccaatcg tcncgaaacg tttctcagag gagtggacga gtgccagtct 60
 tccacttcgg ttccgggcntc gttcgagaag atgataaagg gagggcccagg acaccgtgtg 120
 cagtgccctc gagggccgctg atggtggggc ccagttcaag gagggacgttt ggtccaggcc 180
 cgggtggcggc ggtggcatta gcagggtcct tcaagacggt gccgtttggg agaaggctgg 240
 ggttaa 246

<210> 125
 <211> 261
 <212> nucleic acid
 <213> Glycine max

<400> 125

gaaagagacc ccggaggcca atcgtcccga aacgtttctc agaggagtgg acgaggccca 60
 gtcttccact tcggttcggg cctgcttcga gaagatgata agggaggccc aggacaccgt 120
 gtgcagtgcc ctcgaggccg ctgatggtgg ggcccagttc atggaggacg tttggtccag 180
 gcccggtggc ggcggtggca ttagcagggt cttcaagac ggtgccgttt gggagaaggc 240
 tggggttaat gtctctgttg t 261

<210> 126
 <211> 239
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (184)... (185)
 <223> unsure at all n locations

<400> 126

accaatcgtc ccgaaacgtt tctcagagga gtggacgagg ccagttcttc cacttcggtt 60
 cggggcccgct tcgagaagat gataaggag gccaggaca ccgtgtgcag tgccctcgag 120
 gccgctgatg gtggggccca gttcaaggag gacgtttggt ccaggcccgg tggcggcggt 180

ggcnnacagca ggtccttcaa gacggtgccg ttgaggagaa ggctgggggtt aatgtctct 239

<210> 127
<211> 162
<212> nucleic acid
<213> Glycine max

<400> 127

atcaagtgct tggtatgatg agtcagaatg ttagcttggt gtactagggtg gattgtaaat 60

cacgtatctt gctagagtca tccgcgtaaa gcgtgaaaat gcagaaaatt acaaagtctt 120

aggctgcgtc tgtagtatac ctactgccaa ccattgttct tt 162

<210> 128
<211> 114
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (79),(98)
<223> unsure at all n locations

<400> 128

atcaagtgct tggtcatgat ggtcagaatg ttagcttggt gtactagggtg gattgtaaat 60

cacgtatctt gctagagtnc tccgcgcgga gcgtgaanat gcagagaatt acaa 114

<210> 129
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 129

ggcgtctgcc aaaacaaaaa ggtcagactg ttggatcttt ccggaaggga cttaccatgt 60

tgcctgatgc aatttctgcc agactaggca acaaagtaaa gttatcttgg aagctttcaa 120

gtattagtaa actggatagt ggagagtaca gtttgacata tgaaacacca gaaggagtgg 180

tttctttgca gtgcaaaaact gttgtcctga ccattccttc ctatgttgct agtacatgcc 240

tgcgtcctct gtc 253

<210> 130

<211> 298
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (64)
<223>

<400> 130

gctgcagatg cactttcaaa gttttattac cctccagttg ctgcagtttc catatcctat 60
ccanaagaag ctattagatc agaatgcttg atagatggtg agttgaaggg ggttgggtcaa 120
ttgcatccac gtagacaagg agtggaaaca ttaggaacta tatacagctc atcactattc 180
cccaaccgag caccacgacg gaaggttcta ctcttgaatt acattggagg agcaactaat 240
actggaattt tatcgaagac ggacagtga cttgtggaaa cagttgatcg agatttga 298

<210> 131
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 131

caattatata taatctoctg ctgactcgtc tttttctttg gaataatgat atactgtcaa 60
aaaccatata taatctoctg ctgacacatc tttttctttt cttttcttta tatcatattc 120
cttattagtt tctttgttta ctgcagtgc gagcttagga aaattgttac ttctgacctg 180
agaaagtgtg tgggagcaga gggggaacca acatttgta accatttcta ttggagtaaa 240
ggctttcctt tgtatggacg taactatggg tcagttctta agc 283

<210> 132
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 132

tgacaatttt gatgatagag gtggataata aagctgcagt ccttggttat atcggggcac 60
cgctcactct ggcacacat gtgattgaag gtggttcatc accaaacttc tcgcaaataa 120
agagattggc tttctcagca tccaagatcc tgcactcgtt actgcagaag tttacgacat 180
ctctggcgag atacattctc taccaagctg acaatggagc tcaagctgtt cagatctttg 240

attcatgggc 250

<210> 133
<211> 235
<212> nucleic acid
<213> Glycine max

<400> 133

tgacaatttt gaggaagag gtggataata aagctgcagt ccttggtttt gtcggggcac 60
cgttcactct ggcattcatat gtggttgaag gtggttcattc aaaaaacttc tcaaaaataa 120
agagattggc tttctcagaa tccaagatcc tgcactcgtt actgcagaag ttacaacat 180
caatggcaag atacattcaa taccaagctg acaatggagc tcaagctgtt cagat 235

<210> 134
<211> 282
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (73), (142)
<223> unsure at all n locations

<400> 134

gtggacaact accacctgaa atgtgggaac gctgggtcaaa gccttatatc aaagagattg 60
taaatttggc cangaaaaaa tgccctgggg taccaattgt tctttatata aacggaaatg 120
gtggtcttct tgagcgtatg anagacaccg gagttgatgt tatagggcta gactggacag 180
tggatatggc agatggaaga agaagattgg gtagtgggat aggtgttcag ggaaatgtgg 240
accctgccta cttattctcc cctcttgatg cctgactga ag 282

<210> 135
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 135

gggggatcct gttagtcgtc ctccggcatg gatgatgcgc caggccggaa ggtacatggc 60
tgttttacaaa aagcttgctg agaaatatcc atccttccga gagaggtcag agacaactga 120

tctcattgtg gaaatttctt tgcagccttg gaatgccttc aggcctgatg gagtaattat 180
 cttctcggac atccttacac cacttcctgc gtttggagtt gattttgaca tagaagaagt 240
 aaggggacct gttata 256

<210> 136
 <211> 386
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (186)
 <223>

<400> 136

ttcaggctca gccgcatagt taaggaaccg aaactccaca taggaatcac ttggtttctt 60
 tgctctcccc caacccaatg gctacttcca ttaacagcag tgctctgggg tggaaacatt 120
 catccttctt cgtacaatcc aataatggct tcaacgttgc ttgcctcctt ttcaaacc aa 180
 agccgncacg ctctccaac ttttctctct attgctctgc cgcctcctct tcttctgata 240
 cactgttggt taaggctgct aggggagatc ctgttagtgc tctccagca tggatgatgc 300
 gccaggcagg aagggtacatg gctgtttaca aaaatcttgc tgagaaatat ccatccttcc 360
 gagagaggtc agagacaact gaactc 386

<210> 137
 <211> 291
 <212> nucleic acid
 <213> Glycine max

<400> 137

aggttttaca tccaattgac ctggacaggc ttaaatttgt tggagattca ctaaagatac 60
 tgcgccaaga gggttggtggt catgcagctg ttttgggttt tgtgggagca ccttggacaa 120
 tagcaacata tatagtggaa gggggtacaa cacgcacata tacaaccatt aagagcatgt 180
 gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg 240
 attacgttat tttccaagtg gagtctgggg ctcatgcat acaaataatt g 291

<210> 138
 <211> 288

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<212>      nucleic acid
<213>      Glycine max

<220>
<221>      unsure
<222>      (239), (241)
<223>      unsure at all n locations

<400>      138

gcgccaagag gttggtggtc atgcagctgt tttgggtttt gtgggagcac cttgggacaa   60
tagcaacata tatagtggaa ggggggtacaa cacgcacata tacaaccatt aagagcatgt   120
gccacactgc cccacatgta ttgaggactt tgctttctca tttgacgcag gcaatagctg   180
attacgttat tttccaagtg gagtctgggg ctcatgtcat acaaataatt gattcatgnc   240
ngtggacaat accacctgaa atgtgggaac gctgggtcaaa gccttata                   288

<210>      139
<211>      261
<212>      nucleic acid
<213>      Glycine max

<400>      139

aaagatactg cgccaagagg ttggtgggtc tgcagctgtc ttgggttttg tgggagcacc   60
ttggacaata gcaacatata tagtggaagg ggttacaaca cgcacatata caaccattaa   120
gagcatgtgc cacactgccc cacatgtatt gaggactttg ctttctcatt tgacgcaggc   180
aatagctgat tacgttatit tccaagtgga gtctgggggt cattgcatac aaatattaga   240
tcatgggggtg gacaactacc a                                           261

<210>      140
<211>      213
<212>      nucleic acid
<213>      Glycine max

<400>      140

gacaatagca acatatatag tggaaggggg tacaacagc acatatataa ccattaagag   60
catgtgccac actgccccac atgtattgag gactttgctt tctcatttga cgcaggcaat   120
agctgattac gttatititcc aagtggagtc tgggggtcat tgcatacaaa tatttgattc   180
atgggggtgga caactaccac ctgaaatgtg gga                               213

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<210> 141
 <211> 236
 <212> nucleic acid
 <213> Glycine max

<400> 141

tgttgaaaga cccccggttt ggctcatgag gcaagcaggg aggtacatga agagttacca 60
 aaccatctgt gagaaatatc cttcattccg tgaaagatct gaaaatgttg atctcgtggt 120
 ggaaatttct ctgcaaccat ggcatgtttt taagcccgat ggagtgattt tattctcaga 180
 cattcttacc ccactttctg gaatgaatat accctttgat attgtgaagg gtaagg 236

<210> 142
 <211> 263
 <212> nucleic acid
 <213> Glycine max

<400> 142

tttggctcat gaggcaagca gggaggtaca tgaagagtta ccaaaccatc tgtgagaaat 60
 atccttcatt ccgtgaaaga tctgaaaatg ttgatctcgt ggtggaaatt tctctgcaac 120
 cgtggcatgt tttcaagcct gatggagtga ttttattctc agacattctt accccacttt 180
 ctggaatgaa tatacccttt gatattgtga agggtaaggg tcctgttata ttgatccta 240
 ttcacacatc tgcccaggtt gat 263

<210> 143
 <211> 258
 <212> nucleic acid
 <213> Glycine max

<400> 143

gcttttgcta aatgcagttc gcgggataga tgttgaaaga cccccggttt ggctcatgag 60
 gcaagcaggg aggtacatga agagttacca aaccatctgt gagaaatatc cttcattccg 120
 tgaaagatct gaaaatgtga tctcgtggtg gaaatttctc tgcaaccgtg gcatgttttc 180
 aagcctgatg gagtgatattt attctcagac attcttacc cactttcttg aatgaatata 240
 ccctttgata ttgtgaag 258

<210> 144

<211> 262
 <212> nucleic acid
 <213> Glycine max

<400> 144

caaacatgct ttgcgtcaac actgccttca cctcttttctt gccagaaaa tcaatttgct 60
 tcttttcttc caaatcaacc accccaattt cctgcaccct ccaaggaaca gttgcagaac 120
 caaaatctac agctgctggt gaacctcttt tgctaaatgc agttcgtggg atagatgttg 180
 aaagaccccc ggtttggttc atgaggcaag cagggaggta catgaagagt taccaaacca 240
 tctgtgagag atatccttca tt 262

<210> 145
 <211> 283
 <212> nucleic acid
 <213> Glycine max

<400> 145

acttggtatc tatacagatg ttgcattaga tccttattca tcagatgggc atgatggcat 60
 agttagagaa gatggagtta ttatgaatga tgagacagtt catcagctat gtaaacaagc 120
 tgtagcccag gccaagctg gagcagatgt tgtccagtct agtgatatga tggatgggtcg 180
 ggtaggagca ctgcgtgcag ctctggatgc tgaaggcggt cagcatgtat ctataatgtc 240
 ctatacagca aagtatgcaa gttcttttta tgggtccattt aga 283

<210> 146
 <211> 316
 <212> nucleic acid
 <213> Glycine max

<400> 146

ctgagatgcg ggaggatgaa tctgaaggag ctgacattct cttggtgaag cctggtcttc 60
 cttacttgga tatcataagg ctgctcaggg ataattctcc tttgccaatt gcagcatacc 120
 aggtttctgg tgaatatgca atgataaagg ctgccggtgc tctcaaaatg atagacgaag 180
 aaaaggttat gatggagtca ctgatgtgcc tccgaagggc cggtgctgat atcatcctca 240
 catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagagtgaa gttctctgat 300
 tatgtagggc gttggt 316

<210> 147
 <211> 271
 <212> nucleic acid
 <213> Glycine max

 <400> 147

 tcgccggtaa ggttccgccg gcgcctcccg tgccgccag accggcggt cccggttga 60
 acaccggtgg ttccttcaact tccacaccac cggcgtcctc gtcggaaccg gaagtcgccg 120
 gcgcttcggt cggcttttca ggaaacgagc atttcgccgg cgaatttcgt gtatccgctt 180
 ttcattcacg aaggtgaaga ggatactcca attggggcta tgcttgatg ctacaggctt 240
 ggggtggaggc atggacttgt agaagaggtt g 271

<210> 148
 <211> 275
 <212> nucleic acid
 <213> Glycine max

 <220>
 <221> unsure
 <222> (168), (192)
 <223> unsure at all n locations

<400> 148

 aagcctggtc ttccttactt ggatatcata agtctgctca gggataattc tcctttgcc 60
 attgcagcat accaggttct tttctttgcc cattctagca ctaggcaaaa cgtttctgat 120
 aaaaagttga tcagatatc aatacathtt aaccagtgga attctgcntt aagcttgctg 180
 caagtgacag angtctatac gtagtagaca aatatcacac ctctagttta atatcaggct 240
 gaggtacaag tttatggttg cttaacagt tattg 275

<210> 149
 <211> 191
 <212> nucleic acid
 <213> Glycine max

 <220>
 <221> unsure
 <222> (122), (126), (133), (138), (140), (142), (147) ... (149),
 (152) ... (153), (169), (181), (184), (189)
 <223> unsure at all n locations

 <400> 149

ccggtgctga tatcatcctc acatattctg ctctgcaagc tgccagatgt ttgtgtggag 60
 agaagagggtg aagttctctg attatgcagg gcgttgttca tgtagaaggt tgaagagttt 120
 anaaanccca gtnccggngn tncgggnnnt cnnaaaattt taaaagggnc cccgcggttt 180
 ntcnaaaaang a 191

<210> 150
 <211> 250
 <212> nucleic acid
 <213> Glycine max
 <400> 150

aggagatgaa gcatacagtg aaaatgggtt agtgcctcgg acaatacgtt tgctcaagga 60
 taagttacca gaccttggtg accaatccag aggtggaata aaatcctaata ccgtcagatg 120
 ggcatgatgg catagtaaga gaagatgaag taataatgat tatgagacag gtcacagacc 180
 atggtaacaa gctgtagacc aaggccaagc tggagcagat gttgtcagtc ctagtgatat 240
 gatggatggt 250

<210> 151
 <211> 357
 <212> nucleic acid
 <213> Glycine max
 <400> 151

acggctgcga caagacgaga taatgtggct gattggtaac gtagtgaatc ctgtgcatac 60
 atccgctcgt agcctcttcc tgcgactctc ttctcagtgg gtctccgtat tctccctcaa 120
 tcctattaac cttttcttct ttcatttccc accccattct ataataatc agtgtcaatg 180
 gcttcttcaa tcgctaatagc gccttctgcg ttcaattctc agtactactt tggctctcaga 240
 acgccactga ggtccttcaa cttttcttct cctcaagctg ccaaacttcc acgctcgcat 300
 tgccttttctg tcgtcagagc ctccgattcg gtcttcgaaa ccgccgttgt cgccggt 357

<210> 152
 <211> 418
 <212> nucleic acid
 <213> Glycine max
 <400> 152

agcccaggcg tcagtacggc tgcgagaaga cgacagaagg ggatgggtga ctggttggtt 60
 tttaaattgc atgaaacatt tatttggtct tatagaaaaa gttacaagta agtcttcact 120
 gcaagtagaa gatattggat ccagttccag ggttgaactc catacgatta ttttttaata 180
 gaaaaattga ctgtgacgta gctgtggagg acacgattgg taaagtattg aatccttcct 240
 gcgactcttt tctcattggt tcaactgtgt ctccaaacac atctcagaat ctcttgatt 300
 attattcaat caatcaatgg cttcttcaat ccctaattga cctccctctg cgttgaattc 360
 ccagttctac gatgatctca gaccgccaca gaggaccttc aacttttcct ttcttcaa 418

<210> 153
 <211> 243
 <212> nucleic acid
 <213> Glycine max
 <400> 153

agcccaagcg tcagtacagc tgcgagagga ggacagaagg ggattctaca atcaatcaat 60
 ggcaatggct tcatcaatcc ctaatgcgcc ttctgcgttc aattctcaaa gctacgttgg 120
 tctcaggtcg ccaactgagga ctttcaactt ttcttctcct caaggtggca aaaatcctcg 180
 ctcccaacgc cttttcgacg tcagagcctc cgaatccgag ttccaagccg ccgttgtccc 240
 cgg 243

<210> 154
 <211> 277
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (8), (14), (28), (31), (49), (57), (67), (69), (80),
 (123)...(124), (152), (174), (199), (235)...(237), (242),
 (275)
 <223> unsure at all n locations
 <400> 154

cgcagtcnga ggancctcca cagatatnca nctcttaatg tgcaggaana tttccgnggc 60
 aatgtcnana caaggttaan aaagctcaat gaggggggtg tccaagctac actattagca 120
 ttnnctggac tcaaacgctt aatatgacag anaatgtgac ttcaatccta tcantagatg 180

acagttcatc agctatgtaa acaagctgta gcccagggtca tatgactgtc ttctataaac 240
 attttcaact gtaggcagtt ac 262

<210> 158
 <211> 289
 <212> nucleic acid
 <213> Glycine max

<400> 158

gaaaagggtta tgatggagtc actgatgtgc ctccgaaggc cgggtgctgat atcatcctca 60
 catattctgc tctgcaagct gccagatgtt tgtgtggaga gaagagggtga agttctctga 120
 ttatgtaggg cgttgttcat gtagaagggt gaagagttta taataccagt atctgctgga 180
 ttttggttat tgtaaattgt ttaagaggga catggagggtt tgtgtataga gagacattca 240
 taataaaata ttatggcctc gtttgattta atatatgtaa ggacataat 289

<210> 159
 <211> 255
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (212)
 <223>

<400> 159

ggttatgatg gagtcactga tgtgcctccg aagggccggt gctgatatca tctcacata 60
 ttctgctctg caagctgcc a gatgtttgtg tggagagaag aggtgaagtt ctctgattat 120
 gtagggcggt gtcatgtag aaggttgaag agtttataat accagtatct gctggatttt 180
 ggttattgta aattgtttta gagggacatg gngggtttgtg tatagagaga cattccta 240
 taaatattag ggccc 255

<210> 160
 <211> 262
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (10), (92)

<223> unsure at all n locations

<400> 160

tcgggtaggn gcaactgcgtg cagctctgga tgctgaaggc tttcagcatg tttctataat 60
gtcctataca gcaaagtatg caagttcttt tnatgggtcca tttagagagg cactagactc 120
aaacccccgg tttggagaca agaaaactta tcagatgaac ccagctaatt acagagaggc 180
tctgactgag atgcgggagg atgaatctga aggagctgac attctcttgg tgaagcctgg 240
tcttccttac ttggatatca ta 262

<210> 161

<211> 253

<212> nucleic acid

<213> Glycine max

<400> 161

gacagttcat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60
cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120
aggctttcag catgtttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180
tccatttaga gaggcactag actcaaacc cgggtttgga gacaagaaaa cttatcagat 240
gaaccagct aat 253

<210> 162

<211> 249

<212> nucleic acid

<213> Glycine max

<400> 162

gttgtcagtc ctagtgatat gatggatggt cgggtaggag cactgcgtgc agctctggat 60
gctgaaggct ttcagcatgt tttctataatg tcctatacag caaagtatgc aagttctttt 120
tatgggtccat ttagagaggc actagactca aacccccggg ttggagacaa gaaaacttat 180
cagatgaacc cagctaatta cagagaggct ctgactgaga tgcgggagga tgaatctgaa 240
ggagctgac 249

<210> 163

<211> 248

<212> nucleic acid

<213> Glycine max

<400> 163

gacagttcat cagctatgta aacaagctgt agcccaggcc caagctggag cagatgttgt 60
 cagtcctagt gatatgatgg atggtcgggt aggagcactg cgtgcagctc tggatgctga 120
 aggctttcag catgttttcta taatgtccta tacagcaaag tatgcaagtt ctttttatgg 180
 tccatttaga gaggcactag actcaaacc cgggtttgga gacaagaaaa cttatcagat 240
 gaacccag 248

<210> 164

<211> 414

<212> nucleic acid

<213> Glycine max

<400> 164

acccacgcgt ccgtacggct ggagaagacg acagaagggg attctataat caatcaatgg 60
 caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa ttctcagagc tacgttggtc 120
 tcagagcgcc actgaggacc ttcaactttt cttctcctca agctgccaaa attcctcgct 180
 cccaacgcct tttcgtcgtc agagcctccg attcggagtt cgaagccgcc gttgtcgccg 240
 gtaaggttcc gccggcgctt cccgtgccgc ccagaccggc ggctccgggtt ggaacaccgg 300
 tggttccttc acttccactt caccggcgtc ctgctcgga cgggaagtcg ccggcgcttc 360
 ggtcggcttt tcaggaaacg agcatttcgc cggcgaattt cgtgtatccg cttt 414

<210> 165

<211> 394

<212> nucleic acid

<213> Glycine max

<400> 165

tacggctgcg agaagacgac agaaggggat aatcaatcaa tggcaatggc ttcttcaatc 60
 cctaatagcgc cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg 120
 accttcaact tttcttctcc tcaagctgcc aaaattcctc gctcccaacg cttttcgtc 180
 gtcagagcct ccgattcgga gttcgaagcc gccgttgctg ccggttaagg tccgccggcg 240
 cctcccgctg cgcacagacc ggccggctccg gttggaacac cgttggttcc ttcacttcca 300

cttcaccggc gtcctcgtcg gaaccggaag tcgccggcgc ttcggtcggc ttttcaggaa 360
acgagcattt cgccggcgaa tttcgtgtat ccgc 394

<210> 166
<211> 283
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (158), (185)
<223> unsure at all n locations

<400> 166

gctttctcaa tccctaattgc gccttctgcg ttcaattctc agagctacgt tggcttcaga 60
gcgccactga ggaccttcaa cttttcttct cctcaagctg ccaaaattcc tcgctcccaa 120
cgccctttcg tcgtcagagc ctccgattcg gagttcgnag ccgccgttgt cgccggtaag 180
gttcnccggg cgctcccggt gccgccaga ccggcggtc cggttggaac accggtggtt 240
ccttcacttc cacttcaccg gcgtcctcgt cggaaccgga agt 283

<210> 167
<211> 286
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (156), (183), (193)
<223> unsure at all n locations

<400> 167

aatccctaatt gcgccttctg cgttcaattc tcagagctac gttggtctca gagcgccact 60
gaggaccttc aacttttctt ctctcaagc tgccaaaatt cctcgctccc aacgcctttt 120
cgtcgtcaga gcctccgatt cggagttcga agccgncggt gtcgccggtta aggttccgcc 180
ggngcctccc gtnccgcca gaccggcggc tccggttgga acaccggtgg ttccttcact 240
tcacttcac cggcgtcctc gtcggaaccg gaagtcgcgg cgcttt 286

<210> 168
<211> 278
<212> nucleic acid

<213> Glycine max

<400> 168

cttcaatccc taatgcgct tctggttca attctcagag ctacgttggt ctgagagcgc 60
 cactgaggac cttcaacttt tcttctcttc aagctgcaa aattcctcgc tcccaacgcc 120
 ttttcgtcgt cagagcatcc gattcggagt tcgaagccgc cgttgtcgcc ggtaagggtc 180
 cgccggcgcc tcccgtagcg cccagaccgg cggctccggt tggaacaccg gtggttcctt 240
 cacttccact tcaccggcgt cctcgtcgga accggaag 278

<210> 169

<211> 268

<212> nucleic acid

<213> Glycine max

<400> 169

ggcttcttca atccctaata cgcttcttgc gttcaattct cagagctacg ttggtctcag 60
 agcgccactg aggaccttca acttttcttc tctcaagct gccaaaattc ctgctccca 120
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccggtg tcgccggtaa 180
 ggttccgccc gcgcctcccg tgccgcccag accggcggct ccggttgga caccggtggt 240
 tccttcactt ccacttcacc ggcgctct 268

<210> 170

<211> 356

<212> nucleic acid

<213> Glycine max

<400> 170

attgaatcct gtgcatacat cctcacttat cctcttcttg cgactctctt ctcatagggt 60
 ctccgtattc tccctcaatc ctattaacct tttcttcttt catttccac cccattctat 120
 aatcaatcaa tggcaatggc ttcttcaatc cctaatgcgc cttctgcgtt caattctcag 180
 agctacgttg gtctcagagc gccactgagg accttcaact tttcttctcc tcaagctgcc 240
 aaaattcctc gctcccaacg ccttttcgtc gtcagagcct ccgattcgga gttcgaagcc 300
 gccgttgtag ccggtaagggt tccgccggcg cctcccgtgc cgccagacc ggcggc 356

<210> 171

<211> 287
 <212> nucleic acid
 <213> Glycine max

<400> 171

gcttcttcaa tccctaattgc gccttctgct gttcaatgtc tcgagagctc acgttcgggt 60
 ctccagcagc gaccacttgc aggacgcttg cagacgtttt gcttagctcc tacgaagctt 120
 ggcgcaaata ttgcctgctc taccatacgc ccttttacgt cgtcagagcc tccgattcgg 180
 agttcgaagc cgccgttgct gccggtaagg ttccgccggc gcctcccgctg ccgcccagac 240
 cggcggtctc gggttgaaca ccggtggttc cttcacttcc acttcac 287

<210> 172
 <211> 259
 <212> nucleic acid
 <213> Glycine max

<400> 172

atggcaatgg cttcttcaat ccctaattgc cttctgctg tcaattctca gagctacgtt 60
 ggtctcagag cgccactgag gaccttcaac tttcttctc ctcaagctgc caaaattcct 120
 cgctcccaac gccttttcgt cgtcagagcc tccgattcgg agttcgaagc cgccgttgct 180
 gccggtaagg ttccgccggc gcctcccgctg ccgcccagac cggcggtctc gggttgaaca 240
 ccggtggttc cttcacttc 259

<210> 173
 <211> 258
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (203)
 <223>

<400> 173

ggcttcttca atccctaattg cgccttctgc gttcaattct cagagctacg ttggtctcag 60
 agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctgctccca 120
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180
 gggtccgccg gcgcctcccg tgnccgccag accggcggct ccggttgga caccggtggt 240

tccttcattc cattcacc

258

<210> 174
<211> 234
<212> nucleic acid
<213> Glycine max

<400> 174

ggcttcttca atccctaagc cgccttctgc gttcaattct cagagctacg ttggtctcag 60
agcgccactg aggaccttca actttttcttc tctcaagct gccaaaattc ctgctccca 120
acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180
ggttccgccg gcgcctcccg tgccgccag accggcggtc ccggttgga cacc 234

<210> 175
<211> 251
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (159), (178), (194), (201)
<223> unsure at all n locations

<400> 175

gcttcttcaa tccctaagc gccttctgcg ttcaattctc agagctacgt ttggtctcaga 60
gcgccaactga ggaccttcaa cttttcttct cctcaagctg ccaaaaattc tcgctcccaa 120
cgccttttgc tcgtcagagc ctccgattcg gagttcgang ccgccgttgt cgccggttag 180
gttccgcggg cgntcccggt nccgccaga ccggcggtc ccggttggaac aaccggtggt 240
tccttcactt c 251

<210> 176
<211> 279
<212> nucleic acid
<213> Glycine max

<400> 176

atccctaagc cgccttctgc gttcaattct cagagctacg ttggtctcag agcgccactg 60
aggaccttca actttttcttc tctcaagct gccaaaattc ctgctccca acgccttttc 120

gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa ggttccgccg 180
 gcgcctcccg tgcgcgccag accggcggtt ccggttggaa caccggtggt tccttcactt 240
 ccacttcacc ggcgctctcg tcggaaccgg aagtcgccg 279

<210> 177
 <211> 266
 <212> nucleic acid
 <213> Glycine max

<400> 177

ggcttcttca atccctaata gcgccttctgc gttcaattct cagagctacg ttggtctcag 60
 agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctgcgtccca 120
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 180
 ggttccgccg gcgcctcccg tgcgcgccag accggcggtt ccggttggaa caccggtggt 240
 tccttcactt ccacttcacc ggcgctc 266

<210> 178
 <211> 287
 <212> nucleic acid
 <213> Glycine max

<400> 178

atcctattaa ccttttcttc ttctatttcc caccctattc tatagtcaat caatggcaat 60
 ggcttcttca atccctaata gcgccttctgc gttcaattct cagagctacg ttggtctcag 120
 agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctgcgtccca 180
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gccgccgttg tcgccggtaa 240
 ggttccgccg gcgcctcccg tgcgcgccag accggcggtt ccggttg 287

<210> 179
 <211> 236
 <212> nucleic acid
 <213> Glycine max

<400> 179

caatggcaat ggcttcttca atccctaata gcgccttctgc gttcaattct cagagctacg 60
 ttggtctcag agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc 120

<221> unsure
 <222> (192), (199), (205), (222), (228), (254), (256), (266), (269)
 <223> unsure at all n locations

<400> 182

ggcttcttca atccctaattg cgccttctgc gttcaattct cagagctacg ttggtctcag 60
 agcgccactg aggaccttca acttttcttc tcctcaagct gccaaaattc ctgctccca 120
 acgccttttc gtcgtcagag cctccgattc ggagttcgaa gcagccggtg tcgccggtaa 180
 ggttccgccc gngcttcctt gccgnacaga ccggcggggtc cngttggnac aacgggtggtt 240
 ccttaattcc actnancggc gtcctntcng a 271

<210> 183
 <211> 256
 <212> nucleic acid
 <213> Glycine max

<400> 183

cggtctgaga aaattgactg tcacgtagct gaagctgatt gagctacgtt ggtctcagag 60
 cgccactgag gaccttcaac ttttcttctc ctcaagctgc caaaattcct cgctcccaac 120
 gccttttcca cgtcagagcc tccgattcgg agttcgaagc cgccggtgtc gccggttaagg 180
 ttccgcccgc gcctcccgtg ccgcccagac cggcgggtcc gggtggaaca ccggtgggtc 240
 cttcacttcc acttca 256

<210> 184
 <211> 246
 <212> nucleic acid
 <213> Glycine max

<400> 184

accttgtctt ctttcatttc ccacccatt ctataatcaa tcaatggcaa ttgcttcttc 60
 aatccctaatt gcgccttctg cgttcaattc tcagagctac gttggtctca gagcgccact 120
 gaggaacctt aactttgctt ctctcaagc tgccaaaatt cctcgctccc aacgcctttt 180
 cgtcgtcaga gcctccgatt cggagttcga agccgcggtt gtcgcccgtg agttccgccc 240
 gcgctt 246

<210> 185

<211> 253
 <212> nucleic acid
 <213> Glycine max

<400> 185

cgactctctt ctcattgggt ctcggtatc tccctcaatc ctattaacct tttcttcttt 60
 catttccac cccattctat aatcaatcaa tggcaatggc ttcttcaatc cctaattgagc 120
 cttctgcgtt caattctcag agctacgttg gtctcagagc gccactgagg accttcaact 180
 tttcttctcc tcaagctgcc aaaattcctc gctcccaacg ccttttcgtc gtcagagcct 240
 ccgattcgga gtt 253

<210> 186
 <211> 148
 <212> nucleic acid
 <213> Glycine max

<400> 186

ctgcgttcaa ttctcagagc tacgttggtc tcagagcgcc actgaggacc ttcaactttt 60
 cttctctctc agctgcaaaa attcctcgtc cccaacgcct ttctgctgct agagcctccg 120
 attcggagtt cgaagccgcc gttgtcgc 148

<210> 187
 <211> 271
 <212> nucleic acid
 <213> Glycine max

<400> 187

cggctcgagg ctgaagctga ttggtaaagt attgaatcct gtgcatacat cctcacttat 60
 cctcttctct cgactctctt ctcattgggt ctcggtatc tccctcaatc ctattaacct 120
 tttcttcttt catttccac ccattctata atcaatcaat ggcaatggct tcttcaatcc 180
 ctaatgcgcc ttctgcgttc aattctcaga gctacgttgg tctcagagcg ccaactgagga 240
 ccttcaactt ttcttctctt caagctgcc a 271

<210> 188
 <211> 104
 <212> nucleic acid
 <213> Glycine max

<400> 188

atggcttctt caatccctaa tgcgccttct gcgttcaatt ctacagagcta cgttggtctc 60

agagcgccac tgaggacctt caacttttct tctcctcaag ctgc 104

<210> 189

<211> 64

<212> nucleic acid

<213> Glycine max

<400> 189

agcttcttca atccctaatt gcgccttctgc gttcaattct cagagctacg ttggtctcag 60

agcg 64

<210> 190

<211> 266

<212> nucleic acid

<213> Glycine max

<400> 190

tgggctcact cgagcgaatc ggctcaggaa aattgactgt gacgtagcac atcctgattg 60

gtaaactatt gaatcctgtg catacatcct cacttatcct cttcctgcga ctctcttctc 120

cttggttctc cgtattctcc ctcaatecta ttaacctttt cttctttcat ttcccccccc 180

attctataat caatcaatgg caatggcttc ttcaatccct aatgcgcctt ctgcgttcaa 240

ttctcagagc tacgttggtc tcagag 266

<210> 191

<211> 264

<212> nucleic acid

<213> Glycine max

<400> 191

ctcatataga aaattgactg tgacgttgct gaagctgatt ggtaaagtat tgaatcctgt 60

gcatacatcc tcaattatcc tcttctctgcg actctcttct cattgggttct ccgtattctc 120

cctcaatcct attgaacctt tcttctttca ttcccccccc cattctataa tcaatcaatg 180

gcaatggctt cttcaatccc taatgcgcct tctgcgttca attctcagag ctacgttggt 240

ctcagagcgc cactgaggac cttc 264

<210> 192
 <211> 335
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (8)...(9),(30),(67)...(68),(80)...(81),(140),(153),
 (159),(161)...(162),(267),(331)
 <223> unsure at all n locations

<400> 192

atatgctnnc cagctgttgc ccaaggtgcn attggaatag cctgtagaag taacgatgat 60
 aaaatgnnca gaatacctcn ncttcattga atcatgaaga aacaagacta gcagtttgct 120
 gtgaaagagc cttccttgan aagtagaagg atntgccgna nnctattgca ggctatgcta 180
 gcagaaaacga ggatggcaat tgcttgttta gaggatagtt gcttcccctg atggaacccg 240
 cgtgctcgaa actccagaat ggttcanatg ctttcgaaga tatgataaag atgggtaaga 300
 tgctggagag gagctctttc tcgagctgac ntgct 335

<210> 193
 <211> 257
 <212> nucleic acid
 <213> Glycine max

<400> 193

gaacagcgaa atcgacatcg ctgtccattc gatgaaggat gttcctactt acttgcctga 60
 taaaacaatt ctgccatgta accttccgcg agaggatgtc agagatgcat ttatatcctt 120
 gactgcagct tccttagctg atcttcccc tgcaagtgtt attggtactg cttcgttaag 180
 gcgaaagtca cagatcctcc acagatatcc atctcttaat gtgcaggaaa atttccgtgg 240
 caatgtccaa acaaggt 257

<210> 194
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (172)
 <223>

<400> 194
 cgtttaaata tgacggaaaa tgtgacttcg atcctatcaa ttgatgacat gcttccagct 60
 gttgccaag gtgcaattgg aatagcctgt agaagtaatg atgataaaat ggcggaatac 120
 cttgcttcac tgaatcatga agaaacaaga ctagcagttt cctgcgaaag angcttcctt 180
 gaaaagttgg aagggtctgc cgcactccta ttgcaggcta tgctagcaga aatgaggatg 240
 gcaattgctt gtttagagga ttagttgca 269

<210> 195
 <211> 259
 <212> nucleic acid
 <213> Glycine max

<400> 195
 tgatgataaa atggcggaat accttgcttc actgaatcat gaagaaacaa gactagcagt 60
 ttctgtgaa agatccttcc ttgaaaagtt ggaagggtct tgccgcactc ctattgcagg 120
 ctatgctagc agaaatgagg atggcaattg cttgtttaga ggattagttg catcccctga 180
 tggaatcctg gtgcttgaaa cttccagaat tggcccatat gcgttcgcag atatgataaa 240
 gatgggtaag gatgctgga 259

<210> 196
 <211> 205
 <212> nucleic acid
 <213> Glycine max

<400> 196
 cttaagtatg acagaaaatg tgacttcaat cctatcaatt gatgatatgc ttccagctgt 60
 tgccaaggt gctattggaa tagcatgtag aagtgatgac gataaaatgg cggaatacat 120
 tgctacactt aatcatgaag aaacaagact agcagttgtc tgtgagaggg cctttcttca 180
 gactttggat gggctctgccg cactc 205

<210> 197
 <211> 271
 <212> nucleic acid
 <213> Glycine max

<400> 197

ctgcttcggt aaggcgaaag tcacagatcc tccacagata tccatctctt aatgtgcagg 60
 aaaatttccg tggcaatgtc caaacaaggt taagaaaact caatgagggg gttgtccaag 120
 ctacactatt agcattagct ggactcaaac gcttaagtat gacagaaaat gtgacttcaa 180
 tcctatcaat agatgatatg cttccagctg ttgccaaggg tgccattgga attgcctgta 240
 gaagtgatga cgataaaatg gcagaataca t 271

<210> 198
 <211> 287
 <212> nucleic acid
 <213> Glycine max

<400> 198

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60
 catgaagaaa caaggctagc agttgtctgt gaaagggcct ttcttcagac tttggatggg 120
 tcttgccgca ctctattgc aggggatgct tgtagaaacg aggatggcaa ttgtttgttt 180
 agaggattag ttgcttcccc tgatggaacc agagtgctag agacatccag ggttggtcca 240
 tatgctgttg aagatatgat tgagatgggt aaggatgctg gcaagga 287

<210> 199
 <211> 276
 <212> nucleic acid
 <213> Glycine max

<400> 199

attgggaatt gcctgtagaa gtgatgacga taaaatggca gaatacattg attcacttaa 60
 tcatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttgatgg 120
 gtcttgccgc actcctattg caggggatgc ttgtagaaac gaggatggca attgtttgtt 180
 tagaggatta gttgcttccc ctgatggaac cagagtgcta gagacatcca gggttggtcc 240
 atatgctgtt gaagatatga ttgagatggg taagga 276

<210> 200
 <211> 285
 <212> nucleic acid
 <213> Glycine max

<400> 200

attggaattg cctgtagaag tgatgacgat aaaatggcag aatacattga ttcacttaat 60
ccatgaagaa acaaggctag cagttgtctg tgaaagggcc tttcttcaga ctttggatgg 120
gtcttgccgc actcctattg caggggatgc ttgtagaaac gaggatggca attgtttgtt 180
tagaggatta gttgcttccc ctgatggaac cagagtgcga gagacatcca gggttgggtcc 240
atatgctgtt gaagatatga ttgagatggg taaggatgct ggcaa 285

<210> 201
<211> 259
<212> nucleic acid
<213> Glycine max

<400> 201
gtgaaagggc ctttcttcag actttggatg ggtcttgccg cactcctatt gcaggggatg 60
ctttagaata cgaagatggc aattgtttgt ttagaggatt agttgcttcc cctgatggaa 120
ccagagtgtc agagacatcc agggttgggc catatgctgt tgaagatatg attgagatgg 180
gtaaggatgc tggcaaggag cttctgtctc gggctggacc taacttcttc agtagttagc 240
agcagatgat taaagtgtg 259

<210> 202
<211> 285
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (18)
<223>

<400> 202
gcagacagaa gcgaacgnaa cgggggttgc tcaacaattc gctgttggtg ttctcttctc 60
ttctctttga catgaatact ctttcttcca cgctccatgg cggcaggctt ccccgctcag 120
cttcgaaaac caaaaccgca tctctctcca aatgccatcg catttgggtc accaaagctt 180
ctgttgccgt tgagcaacaa actaaggctg ctctcatcag aattggtacc agaggaagtc 240
cactagctct agcacaagca tatgagacca gagacaaact catgg 285

<210> 203

<211> 282
 <212> nucleic acid
 <213> Glycine max
 <400> 203
 agcagacaga agcgagcgaa acgggggttg ctcaacaatt cgctgttggt gttctcttct 60
 cttctctttg acatgaatac tctttcttcc acgtccatg gcgggaggct tccccgctca 120
 gcttcgaaaa ccaaaaccgc atctctctcc aaatgccatc gcatttggtt caccaaagct 180
 tctgttgccg ttgagcaaca aactaaggtc gctctcatca gaattggtac cagaggaagt 240
 ccactagctc tagcacaagc atatgagacc agagacaaac tc 282

<210> 204
 <211> 251
 <212> nucleic acid
 <213> Glycine max
 <400> 204
 ccgaacgaaa cgggggttgcc tcaacaattc gctgttggtt ttctcttctc ttctctttga 60
 catgaatact ctttcttcca cgctccatgg cgggtggctt ccccgctcag cttcgaaaac 120
 cacaaccgca tctctctcca aatgccatcg catttggttc accaaagctt ctgttgccgt 180
 tgagcaacaa actaaggctg ctctcatcag aattggtacc agaggaagtc cactagctct 240
 agcacaagca t 251

<210> 205
 <211> 327
 <212> nucleic acid
 <213> Glycine max
 <400> 205
 atcggcaagg taaggcaatt gaagttgtga aatggagact gtctgctctg cattggtggt 60
 cccatctttc agaatcacia cttcagcttt ctccaaatgt ggcatcaggg cttccattgc 120
 cgttgagcaa caaacttcgc agactaagggt tgctctctc aaaattggta ccagaggaag 180
 tccactagct ctggctcagg catatgagac cagagacaag ctcatggcat cacatccaga 240
 gctagcggaa gaaggggcta ttcagattgt gataatgaaa acaactggtg acaaaatact 300
 atcacagcca cttgcagaca tcggcgg 327

<210> 206
 <211> 390
 <212> nucleic acid
 <213> Glycine max

<400> 206

gaaatggaga ctctctgctc tgcattgggtg ttcccatctt tcagaatcac aacttcagct 60
 ttctccaaat gtggcatcag ggctttcatt gccgttgagc aacatacttc gcagactaag 120
 gttgctctcc tcaaaattgg taccagagga agtccactag ctctgggtca tgcataatgag 180
 accagagaca atctcatggc atcacatcca gagctagcgg atgaaggggc tattcagatc 240
 gtgataataa aaacaactgg tgacattata ctatcacagc cacttgacga catcggcggg 300
 aagggcctgt ccacaatcga tatagacgag gcactcatta acggtgacat tgacatcgcc 360
 gttcactcta tgaaagatgt acccacttac 390

<210> 207
 <211> 256
 <212> nucleic acid
 <213> Glycine max

<400> 207

cggtgctctc ctcaaatg gtaccagagg aagtcacta gctctggctc acgcatatga 60
 gaccagagac aagctcatgg catcacatgc agagctagca caagaagggg ctattcagat 120
 tgtaataatc aaaacaactg gtgacaaaat actatcacag ccacttgacg acattggtgg 180
 gaagggccta ttcacaaaag aaatagatga ggcaactcata aacggtgaca ttgacatcgc 240
 tgtccactca atgaaa 256

<210> 208
 <211> 289
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (13), (47), (80), (103), (234), (247), (251), (263)
 <223> unsure at all n locations

<400> 208

ggagaccctc tgnctctgca ttggtgttcc catctttcag aatcagnact tcagctttct 60

ccaaatgtgg catcagggcn tccattgccg ttgagcaaca aanttcccag actaagggtg 120
 ctctcctcag aattgggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180
 gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagnttgtaa 240
 taataanaac nactgggtgac aanatactat cacagccact tgcagacat 289

<210> 209
 <211> 259
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (92), (125)
 <223> unsure at all n locations

<400> 209
 agggcttcca ttgccgttga gcaacaaact tcccagacta aggttgctct cctcagaatt 60
 ggtaccagag gaagtccact agctctggct cncgcatatg agaccagaga caagctcatg 120
 gcatnccatg cagagctagc agaagaaggg gctattcaga ttgtaataat aaaaacaact 180
 ggtgacaaaa tactatcaca gccacttgca gacattgggtg ggaagggcct attcacaaaa 240
 gaatagatga ggcatcata 259

<210> 210
 <211> 268
 <212> nucleic acid
 <213> Glycine max
 <400> 210

ctctctgctc tgcattgggtg ttcccatatt tcagaatcac aacttcagct ttctccaaat 60
 gtggcatcag ggcttccatt gccgttgagc aacaaacttc gcagactaag gttgctctcc 120
 tcaaaattgg taccagagga agtcactag ctctgggtca ggcatatgag accagagaca 180
 agctcatggc atcacatcca gagctagcgg aagaaggggc tattcagatt gtgataataa 240
 aaacaactgg tgacaaaata ctatcaca 268

<210> 211
 <211> 270
 <212> nucleic acid

<213> Glycine max

<400> 211

ggagactctc tgctctgcat tgggtgtccc atctttcaga atcacaactt cagctttctc 60
 caaatgtggc atcagggcct ccattgccgt tgagcaacaa acttcgcaga ctaagggtgc 120
 tctcctcaaa attggtacca gaggaagtcc actagctctg gctcaggcat atgagaccag 180
 agacaagctc atggcatcac atccagagct agcggaagaa ggggctattc agattgtgat 240
 aataaaaaca actggtgaca aaatactatc 270

<210> 212

<211> 295

<212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> (246)

<223>

<400> 212

tggagaccct ctgctctgca ttggtgttcc catctttcag aatcagaact tcagctttct 60
 ccaaagtgtg catcagggct tccattgccg ttgagcaaca aacttcccag actaagggtg 120
 ctctcctcag aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180
 gagacaagct catggcatca catgcagagc tagcagaaga aggggctatt cagattgtat 240
 aataanaaca actggtgaca aaatatatca cagccattgc agacattggt gggag 295

<210> 213

<211> 267

<212> nucleic acid

<213> Glycine max

<400> 213

ctctctgctc tgcattggtg ttcccatctt tcagaatcac aacttcagct ttctccaaat 60
 gtggcatcag ggcttccatt gcogttgagc aacaaacttc gcagactaag gttgctctcc 120
 tcaaaattgg taccagagga agtccatagc tctggctcag gcatatgaga ccagagacaa 180
 gctcatggca tcacatccag agctagcgga agaaggggct attcagattg tgataataaa 240
 aacaactggt gacaaatact atcacag 267

<210> 214
 <211> 251
 <212> nucleic acid
 <213> Glycine max

<400> 214

tggagactct ctgctctgca ttggtgttcc catctttcag aatcacaact tcagctttct 60
 ccaaagtgtg catcagggtt tccattgccg ttgagcaaca aacttcgcag actaagggtg 120
 ctctcctcaa aattggtacc agaggaagtc cactagctct ggctcaggca tatgagacca 180
 gagacaagct catggcatca catccagagc tagcggaaga aggggctatt cagattgtga 240
 taataaaaac a 251

<210> 215
 <211> 159
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (130), (144), (158)
 <223> unsure at all n locations

<400> 215

ccacttcagc tttctccaaa tgtggcatca gggcttccat tgccgttgag caacaaactt 60
 cccagactaa ggttgctctc ctcagaattg gtaccagagg aagtccacta gctctggctc 120
 aggcatatgn gaccagagac aagntcatgg catcacang 159

<210> 216
 <211> 270
 <212> nucleic acid
 <213> Glycine max

<400> 216

gttcccatct ttcagaatca gaacttcagc tttctccaaa tgtggcatca gggcttccat 60
 tgccgttgag caacaaactt cccagactaa ggttgctctc ctcagaattg gtaccagagg 120
 aaggtagcct acccttaaaa ataacacctt tagcttctta tgagcatttc ttttaaagaa 180
 caagtctgtg aaaatattga gtcctgaatc tcttcaaaac tttgcctca ttttcaaatt 240

tagttttcaa tgctagtttt atgacagaaa

270

<210> 217
 <211> 147
 <212> nucleic acid
 <213> Glycine max

<400> 217

gtgaaatgga gaccctctgc tctgcattgg tgttcccatc tttcagaatc agaacttcag 60

ctttctccaa atgtggcatc agggcttcca ttgccgttga gcaacaaact tcccagacta 120

aggttgctct cctcagaatt ggtacca 147

<210> 218
 <211> 253
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (64), (93)
 <223> unsure at all n locations

<400> 218

ccaagaccga caacaaactc actcttacca agtccgagga agctttcgct gctgccaagg 60

agcngatgcc tggaggtgtc aactccccag ttngtgcctt caaatccgtg ggtggtcaac 120

caattgtgat tgattcagtc aaaggggtctc gtatgtggga catcgacggc aatgagtaca 180

ttgactacgt cggttcttgg gggtcccgcaa tcattgggtca cgctgatgat caagtgcctt 240

cagctctggg tgt 253

<210> 219
 <211> 264
 <212> nucleic acid
 <213> Glycine max

<400> 219

tgcgtgcgtg agcgtcttac ctttccatta tcaaaatgac tgtttcagct atcacaggct 60

cgcagttctca cctcttgcca tggttagcga tacctctttc ctctcccaag cgctctcgaa 120

tcgtcgcaat ggccgtatcc gtcgtcccca agaccgacaa caaactcaact cttaccaagt 180

ccgaagcagc tttcgctgct gccaaaggagc tgctgcctgg cgggtgtcaac tccccagttc 240

gtaccttcaa atccgtaggt ggtc 264

<210> 220
<211> 157
<212> nucleic acid
<213> Glycine max

<400> 220

ctcgtctgag ggctgttacc atggccatgc tgatcctttt cgtgttaagg caggtagtgg 60

agttgccacc ttgggacttc ctgattctcc cgggtgtcccc aaagctgaca ctgtggaaac 120

ccttacagcg ccctacaatg atactgccgc cgtcgag 157

<210> 221
<211> 266
<212> nucleic acid
<213> Glycine max

<400> 221

aaaccogatt ttcataattt cttgcgcaag atcaccaagg agaacaatac ctttcttgtg 60

tttgatgaag ttatgactgg gtttcgtttg tcatacggag gtgctcaaga gtattttggc 120

ataactoctg atatacaact ctaggaaaga tcattgggtg aggtctgccg gtgggggctt 180

atggagggag gagggatatt atggagaagg tggcaccagc tggcccaatg tatcaggctg 240

ggacottgag tgggaacctt tggcca 266

<210> 222
<211> 250
<212> nucleic acid
<213> Glycine max

<400> 222

aaaggagaaa ttgccgcagt tttcctcgaa cctgttggtg gaaacgctgg tttcattgtt 60

cctaagcctg attttcatag tttcttgccg aagatcacca aggagaacaa tacccttctt 120

gtgtttgatg aagtcattgac tggatttcgt ttgtcatatg gagtgctca agagtattat 180

ggcataactc cagatataac aactctagga aagatcattg gtggaggtct gccggtaggg 240

cttatggagg 250

<210> 223
 <211> 256
 <212> nucleic acid
 <213> Glycine max
 <400> 223
 gctcaagagt attttggcat aactcctgat ataacaactc taggaaagat cattggtgga 60
 ggtctgccgg tgggggctta tggagggagg agggatatta tggagaaggt ggcaccagct 120
 ggcccaatgt atcaggctgg gaccttgagt gggaaccctt tggccatgac tgcaggaata 180
 cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa aatcaccggt 240
 gagcttgttc agggca 256

<210> 224
 <211> 288
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (7), (22), (45), (213), (283)
 <223> unsure at all n locations
 <400> 224
 tttaggnagc tgatgcctgg anggcgtgaa ctccccagtt cgtgncttca aatccgtggg 60
 tgggtcaacca attgtgattg attcagtcaa agggctctcgt atgtgggata tcgatggcaa 120
 tgagtacatt gactacgttg gttcctgggg tcttgcaatc attgggtcacg ctgatgatca 180
 ggtgcttgca gctctgggtg aaaccatgaa ganaggaacc agctttgggt gcaccctgtc 240
 tgctggaaaa cacttttggc agagctgggt tatcgatgcc gtncccca 288

<210> 225
 <211> 283
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (93), (98), (101), (130), (150), (157), (172), (177), (196),
 (215), (243), (270)
 <223> unsure at all n locations
 <400> 225

atattgcaga tgccaaaaag agtgatacgg ccaagtttgc taggcccttt tggggaatgc 60
 tggcggaagg tgtctatttg gcaccttccc agnttgangc nggcttcacc agcttggcac 120
 atacttctgn tgacataaaa aagacgatan ccgctgntga gaaggttttc anggagntct 180
 gatgggttaaa ttttgntttg ttgcaaattt aattntcgga ggggtgaattt ttaggtcaat 240
 ttngattatt gttatggcag ttgctttcgn tatgatctgt atc 283

<210> 226
 <211> 249
 <212> nucleic acid
 <213> Glycine max

<400> 226

gggtcctgca atcattgggtc acgctgatga tcagggtgctt gcagctctgg gtgaaaccat 60
 gaagaaagga accagctttg gtgcacctg tctgctggaa aacactttgg cagagctggc 120
 tatcgatgcc gtccccagca ttgaaatggg tcggtttgtc aattcaggca ctgaagcttg 180
 catgggtgcg ctccgtctgg ccggtgctta taccggaaga gagaagatca tcaagtttga 240
 gggctgtta 249

<210> 227
 <211> 442
 <212> nucleic acid
 <213> Glycine max

<400> 227

ataaggcttt gcatttcatt tgagagagag agcgtcttac ctttccatta tcaaaatggg 60
 tgggtcgggt atcacaggag cgaggctaac cctagggata gggttggcga tacctctttc 120
 ctctcccacg cgctctcgaa ccgtcgcaat ggccgtatcc gtcgacccca agaccgacaa 180
 caaactcact cttaccaagt ccgaggaagc tttcgctgct gccaaaggtag gcatgacctc 240
 cctcttcctt ccttccttcc tcctttcaat tttgattttt gatttttgat ttcaggagct 300
 gatgcctgga ggtgtcaact cccagttcg tgccttcaaa tccgtgggtg gtcaaccaat 360
 tgtgattgat tcagtcaaag ggtctcgtat gtgggacatc gacggcaatg agtacattga 420
 ctacgtcggg tcttggggtc cc 442

<210> 228

<211> 275
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (93)
 <223>

<400> 228

tcaaaatggc tgtttcggct atcacaggag cgaggctaac cctagggata gggttggcga 60
 tacctctttc ctctcccacg cgctctcgaa cntcgcgaat ggccgtatcc gtcgacccca 120
 agaccgacaa caaactcact cttaccaagt ccgaggaagc tttcgtctgt gccaaaggagc 180
 tgatgcctgg aggtgtcaac tccccagttc gtgccttcaa atccgtgggt ggtcaaccaa 240
 ttgtgattga ttcagtcaaa ggtctctgta tgtgg 275

<210> 229
 <211> 261
 <212> nucleic acid
 <213> Glycine max

<400> 229

accacgcgt ccgacggctg caagaggacg acagaagggg aaggctttgc atttcatttg 60
 agagagagag cgtcttacct ttccattatc aaaatggctg tttccgctat cacaggagcc 120
 aagctaacc taaggataag gttggcgata cctccttctt ctccaagcg ctctcgaacc 180
 gtcgcaatgg ccgtatccgt cgaccccaag accgacaaca aactcaatcc taccaagtcc 240
 gaagaagctt togtgctgc c 261

<210> 230
 <211> 289
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (35)
 <223>

<400> 230

ggagaggata aggcctttgca tttcatttga gaganagagc gtcttacctt tccattatca 60

aaatggctgt ttcggtatc acaggagcga ggctaaccct agggataggg ttggcgatac 120
 ctctttcttc tcccacgcgc tctcgaaccg tcgcaatggc cgtatccgtc gacccaaga 180
 ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240
 tgcctggagg tgtcaactcc ccagttcgtg cttcaaatac cgtgggtgg 289

<210> 231
 <211> 252
 <212> nucleic acid
 <213> Glycine max

<400> 231

agcgtcttac ctttccatta tcaaaatggc tgtttcggct atcacaggag cgaggctaac 60
 cctagggata gggttggcga tacctctttc ctctcccacg cgctctcgaa ccgtcgcaat 120
 ggccgtatcc gtcgaccca agaccgacaa caaactcact cttaccaagt ccgaggaagc 180
 tttcgctgct gccaaaggagc tgatgcctgg aggtgtcaac tcccagttc gtgccttcaa 240
 atccgtgggt gg 252

<210> 232
 <211> 281
 <212> nucleic acid
 <213> Glycine max

<400> 232

ggctttgcat ttcatttgag agagagagcg tcttaccttt ccattatcaa aatggctgtt 60
 tcggctatca caggagcgag gctaacccta gggatagggt tggcgatacc tctttcctct 120
 cccacgcgct ctcgaaaccg cgcaatggcc gtatccgtcg accccaagac cgacaacaaa 180
 ctcaacttta ccaagtccga ggaagctttc gctgctgcca aggagctgat gcctggaggt 240
 gtcaactccc cagttcgtgc cttcaaatac gtgggtggtc a 281

<210> 233
 <211> 276
 <212> nucleic acid
 <213> Glycine max

<400> 233

taaggctttg catttcattt gagagagaga gcgtottacc tttccattat caaaatggct 60

gtttcggcta tcacaggagc gaggctaacc ctagggatag gggtggcgat acctctttcc 120
 tctcccacgc gctctcgaac cgtcgcgaatg gccgtatccg tcgaccccaa gaccgacaac 180
 aaactcactc ttaccaagtc cgaggaagct ttcgctgctg ccaaggagct gatgcctgga 240
 ggtgtcaact ccccagttcg tgccttcaaa tccgtg 276

<210> 234
 <211> 276
 <212> nucleic acid
 <213> Glycine max

<400> 234

ttgcatttca tttgagagag agagcgtctt acctttccat tatcaaaatg gctgtttcgg 60
 ctatcacagg agcagaggcta accctaggga taggggttgg gatacctctt tcctctccca 120
 cgcgctctcg aaccgctcga atggccgtat ccgctgaccc caagaccgac aacaaactca 180
 ctcttaccaa gtccgaggaa gctttcgtcg ctgccaagga gctgatgcct ggaggcogtc 240
 aatccccagt tcgtgccttc aaatccgtgg gtggtc 276

<210> 235
 <211> 251
 <212> nucleic acid
 <213> Glycine max

<400> 235

tttgcatthc atttgagaga gagagcgtct tacctttcca ttatcaaaat ggctgtttcg 60
 gctatcacag gagcagaggct aaccctaggg atagggttgg cgatacctct ttcctctccc 120
 acgcgctctc gaaccgtcgc aatggccgta tccgtcgacc ccaagaccga caacaaactc 180
 actcttacca agtccgagga agctttcgtc gctgcaagga gctgatgcct ggagggtgtca 240
 actccccagt t 251

<210> 236
 <211> 271
 <212> nucleic acid
 <213> Glycine max

<400> 236

cggctcgaca aggctttgca tttcatttga gagagagagc gtcttacctt tccattatca 60

aaatggctgt ttcggctatc acaggagcga ggctaaccct agggataggg ttggcgatac 120
 ctctttcctc tcccacgcgc tctogaaccg tcgcaatggc cgtatccgtc gacccaaga 180
 ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240
 tgcttgaggg tgtcaactcc ccagttcgtg c 271

<210> 237
 <211> 257
 <212> nucleic acid
 <213> Glycine max

<400> 237

ggagaggata aggctttgca tttcatttga gagagagagc gtcttaactt tacattatca 60
 aaatggctgt ttcggctatc acaggagcga ggctaaatct agggataggg ttggcgatac 120
 ctctttcctc tcccacgcgc tctogaaccg tcgcaatggc cgtatccgtc gacccaaga 180
 ccgacaacaa actcactctt accaagtccg aggaagcttt cgctgctgcc aaggagctga 240
 tgcttgaggg tgtcaac 257

<210> 238
 <211> 153
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (40), (53), (71), (103)
 <223> unsure at all n locations

<400> 238

acaggagcga ggctaaccct agggataggg ttggcgatan ctctttcctc tncactccg 60
 ctctcgaacc ntcgcaatgg ccgtatccgt cgacccaag acngacaaca aactcactct 120
 taccaagtcc gaggaagctt tcgctgctgc caa 153

<210> 239
 <211> 104
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (88)

<223>

<400> 239

acggctgcga gaagacgaca gaagggggag cgtcttacct ttccattatc aaaatggcta 60

tttcggctat cacaggagcg aggctaance tagggatagg gttg 104

<210> 240

<211> 268

<212> nucleic acid

<213> Glycine max

<400> 240

ggctgggacc ttgagtggga accctttggc catgactgca ggaatacaga ccctgcagcg 60

tattaaggag ccaggaactt atgagtactt ggacaaaatc accggtgagc ttgttcaggg 120

cattattgaa gctgggaaga gggcaggcca tgcaatatgt ggtggtcata taagggggat 180

gtttgggttt ttcttcacag aaggaccagt gtataatddd gcagatgcca aaaagagtga 240

tacggacaag tttctaggtt cttttggg 268

<210> 241

<211> 256

<212> nucleic acid

<213> Glycine max

<400> 241

gaaggtggca ccagctggcc caatgtatca ggctgggacc ttgagtggga accctttggc 60

catgactgca ggaatacaga ccctgcagcg tattaaggag ccaggaactt atgagtactt 120

ggacaaaatc accggtgagc ttgttcaggg cattattgaa gctgggaaga gggcaggcca 180

tgcaatatgt ggtggtcata taagggggat gtttgggttt ttcttcacag aaggaccagt 240

gtataatddd gcagat 256

<210> 242

<211> 253

<212> nucleic acid

<213> Glycine max

<400> 242

ggcaccagct ggcccaatgt atcaggctgg gaccttgagt gggaaccctt tggccatgac 60

tgcaggaata cagaccctgc agcgtattaa ggagccagga acttatgagt acttggacaa 120
aatcaccggt gagcttgttc agggcattat tgaagctggg aagagggcag gccatgcaat 180
atgtggtggt catataaggg ggatgtttgg gtttttcttc acagaaggac cagtgtataa 240
ttttgcagat gcc 253

<210> 243
<211> 269
<212> nucleic acid
<213> Glycine max
<400> 243

ctcgagccgc tcgagccggt ctgctggaaa acactttggc agagctgggt atcaatgcgg 60
tccccagcat tgcaatgggt cgctttgtca attcaggcac cgaagcttgc atgggtgcac 120
tacgtctcgc ccgagcttat accggaagag agaagatcat caagtttgag ggctgttacc 180
atggccatgc tgatcctttt cttgttaagg caggtagtgg agttgccacc ttgggacttc 240
ctgattctcc cgggtgtccc aaagctgcc 269

<210> 244
<211> 266
<212> nucleic acid
<213> Glycine max
<400> 244

ctcgagccgc tcgagccggt ctgctggaaa acactttggc agagctgggt atcaatgcgg 60
taccagcat taccaatggt tcgctttgtc aattcaggca ccgaagcttg catgggtgca 120
ctacgtctcg cccgagctta taccggaaga gagaagatca tcaagtttga gggctgttac 180
catggccatg ctgatccttt tcttgtaag gcaggtagtg gagttgccac cttgggactt 240
cctgattctc ccgggtgtccc caaagc 266

<210> 245
<211> 266
<212> nucleic acid
<213> Glycine max
<400> 245

tcaagtttga gggctgttac cgtggccatg ctgatccttt tcttgtaag gcaggtagtg 60

<211> 406
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (269), (356), (372)
 <223> unsure at all n locations

<400> 249

acgccccacgc gtccgtacgg ctgcgagaag acgacagaag ggggtggttg atgaggcgaa 60
 actcgagagt gtaaggtttt gcatttcatt tgacgaagag tgagagagtc ttatctgtcg 120
 tctctgatct ctgatcgcat cttcattccg aaaatggctg ttccggctat cactggagcg 180
 aggctaactc tagggatgtc tctttcctct tccacggcat cacgaaccgt cgcaatggcc 240
 gtatctatcg accccaagac cgataacana ctactctta ccaagtccga ggaagcttcc 300
 gctgcggcca aagagctgat gcctggaggg gtgaactccc cagttcgtgc cttcanatcc 360
 gtgggtggtc anacaattgt gattgattca gtcaaagggg ctcgta 406

<210> 250
 <211> 305
 <212> nucleic acid
 <213> Glycine max

<400> 250

cccacgcgtc cgtacggctg cgagaagacg acagaagggg gagagtgtaa ggttttgcatt 60
 ttcatttgac gaagagtgtg agagtcttat ctgtcgtctc tgatctctga tcgcatcttc 120
 attccgaaaa tggtctgttt ggctatcact ggagcgaggg taactctagg gatgtctctt 180
 tcctcttcca cgcgatcacg aaccgtcgca atggccgtat ctatcgacct caagaccgat 240
 aacaaaactca ctcttaccac gtccgaggaa gctttcgtcg cggccaagga gctgatgcct 300
 ggagg 305

<210> 251
 <211> 296
 <212> nucleic acid
 <213> Glycine max

<400> 251

gaaactcgag agtgtaagg tttgcatttc atttgacgaa gagtgagaga gtcttatctg 60

tcgtctctga tctctgatcg catcttcatt ccgaaaatgg ctgtttcggc tatcactgga 120
gcgaggctaa ctctagggat gtctctttcc tcttccacgc gatcaacaac acaagcaatg 180
gccgtatcta tcgaccccaa gaccgataac aaactcactc ttaccaagtc cgaggaagct 240
ttcgctgcgg ccaaggagct gatgcctgga ggcgtgaact cccagttcg tgcctt 296

<210> 252
<211> 266
<212> nucleic acid
<213> Glycine max
<400> 252

ctgcgagaag acgacagaag ggggagagtg taaggttttg catttcattt gacgaagagt 60
gagagagtct tatctgtcgt ctctgatctc tgatcgcacg ttcatccga aaatggctgt 120
ttcggctatc actggagcga ggctaactct agggatgtct ctttcctctt ccacgcgacg 180
acgaaccgtc gcaatggccg tatctatcga cccaagacc gataacaaac tcaactttac 240
caagtccgag gaagctttcg ctgcgg 266

<210> 253
<211> 293
<212> nucleic acid
<213> Glycine max
<220>
<221> unsure
<222> (196)
<223>

<400> 253
ggttttgcat ttcatattgac gaagagtgag agagtcttat ctgtcgtctc tgatctctga 60
tcgcatcttc attccgaaaa tgggtgtttcg gctatcactg gagcgaggta actctaggga 120
tgtctctttc ctcttccacg cgatcacgaa ctgaagcaat ggccgtatct atcgacccca 180
agaccgataa caaacncatc ttaccaagtt cgaggaagtt tcgctgcggc caaggagtga 240
tgctggaggg gtgaactccc cagttcgtgc cttcaaatac gtgggtgggtc aac 293

<210> 254
<211> 273
<212> nucleic acid

<213> Glycine max

<400> 254

gttgagagagg cgaaactcga gagtgtaagg ttttgcattt catttgacga agagtgaagag 60
 agtcttatct gtcgtctctg atctctgac gcaccttcat tccgaaaatg gctgtttcgg 120
 ctatcactgg agcgaggcta actctaggga tgtctctttc ctcttccacg cgatcacgaa 180
 tccccgcaat ggccgtatct atcgacccca agaccgataa caaactcact cttaccaagt 240
 ccgaggaagc tttcgctgcg gcccaaggagc tga 273

<210> 255

<211> 267

<212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> . (67), (85), (90), (100), (124)... (125), (140), (148), (151),
 (153), (162), (164), (173)... (174), (176)... (178), (181),
 (184), (190), (192), (209), (220), (226), (231), (237), (263),
 (265)

<223> unsure at all n locations

<400> 255

gggcgaaaact cgagagtgtga aggttttgca tttcatttga cgaagagtga gagagtctta 60
 tctgtcncct ctgatctctg atcgatctn cattccgaan atggctgttt cggctatcac 120
 tggnncgagg ctaactctan ggatgtcncct ntncctcttc angngatcac gcnnntnnncg 180
 naanggacgn anctatcgac cccaagacng ataacaaatn actctnacca ngtcgngga 240
 agctttcgct gcggccaagg agtnnat 267

<210> 256

<211> 254

<212> nucleic acid

<213> Glycine max

<400> 256

ggcgaaaactc gagagtgtaa ggttttgcat ttcatttgac gaagagtga agagtcttat 60
 ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggctgtttc ggctatcact 120
 ggagcgaggc taactctagg gatgtctctt tctcttcca cgcgatcacg aacccatgca 180

atggccgtat ctatcgaccc caagaccgat aacaaactca ctcttaccaa gtccgaggaa 240
gctttcgctg cggc 254

<210> 257
<211> 254
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (188)
<223>

<400> 257

gttgatgag gcgaaactcg agagtgtgtaag gttttgcatt tcatttgacg aagagtgaga 60
gagtcttata tgcgtctct gatctctgat cgcattctca ttccgaaaat ggctgattcg 120
gctatcactg gagcgccgtt aactctaggg atgtcttctt cctcgtgcag gcgacctcga 180
acgctggnaa tggccgtatc tatcgacccc aagaccgata acaaaactcac tcttaccaag 240
tccgaggaag cttt 254

<210> 258
<211> 270
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (48)...(49), (56), (58), (86), (117), (137), (184), (200),
(204), (208), (226), (232)...(233)
<223> unsure at all n locations

<400> 258

aggttttgca ttctatttga cgaagagtga gagagtctta tctgtcgnnt ctgatntntg 60
atcgcatctt cattccgaaa atggcngttt cggctatcac tggagcgagg ctaagtntag 120
ggatgtctct ttacctnttc caccgatca cgaaccacac gcaatggccg tatctatcga 180
ccnaagacc gctaacaaan tcantctnac caagttccga ggaagntttg gnnngcgggc 240
aagggagtga tgcctggagg cgtgaactcc 270

<210> 259
<211> 165

<212> nucleic acid
 <213> Glycine max
 <400> 259
 ggcgaaactc gagagtgtaa ggttttgcat ttcatttgac gaagagtgag agagtcttat 60
 ctgtcgtctc tgatctctga tcgcatcttc attccgaaaa tggtgttttc ggctatcact 120
 ggagcgaggc taactctagg gatgtctctt tctcttcca caca 165
 <210> 260
 <211> 161
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (50)
 <223>
 <400> 260
 cgaaactcga gagtgtgaagg ttttgcat ttcatttgacga agagtgagan agtcttatct 60
 gtcgtctctg atctctgatc gcattcttcatt tcccgaaaat ggctgttttcg gctatcactg 120
 gagcgaggct aactctagg atgtctcttt cctcttccac a 161
 <210> 261
 <211> 153
 <212> nucleic acid
 <213> Glycine max
 <400> 261
 aaggttttgc atttcatttg acgaagagtg agagagtctt atctgtcgtc tctgatctct 60
 gatcgcatct tcattccgaa aatggctgtt tcggctatca ctggagcgag gctaactcta 120
 gggatgtctc tttcctcttc cacacaacat acg 153
 <210> 262
 <211> 241
 <212> nucleic acid
 <213> Glycine max
 <400> 262
 cttcatttga cgaagagtga gagagtctta tctgtcgtct ctgatctctg atcgcatctt 60

cattccgaaa atggctgttt cggctatcag tggagcgagg ctaactctag ggatgtctct 120
 ttcctgttcc acgcgatgta taagatgatg gatggccgca tctatcgacc tctagacagc 180
 taagatactc agtcttagga ggtccgagga agctttcgct gtggccaagg attgatgtcc 240
 a 241

<210> 263
 <211> 130
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (30),(66)...(67)
 <223> unsure at all n locations

<400> 263
 gcgaaactcg agagtgtgtaag gttttgcatn tcatttgacg aagagtgaga gagtcttatac 60
 tgtcgnntct gatctctgat cgcatcttca ttccgaaaat ggctgtttcg gctatcactg 120
 gagcgaggct 130

<210> 264
 <211> 169
 <212> nucleic acid
 <213> Glycine max
 <400> 264
 cgctcgagcg aatcggctca cggtcagagg ttttgcatth actttgacga agagtgcga 60
 gagtcttatac tgtcgtctct gatctctgat cgcatcttca ttccgaaaat ggctgtttcg 120
 gctatcactg gagcgaggct aactctaggg atgtctcttt cctcttcca 169

<210> 265
 <211> 181
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (12),(22),(25),(31),(34),(57),(66),(75),(77)...(78),
 (88),(98),(143),(150)...(151),(174)...(175),(178)
 <223> unsure at all n locations
 <400> 265

gcgaaactcg anagtgttaag gnttngcatt ncanttgacg aagagtgaga gagtctnate 60
 tgctcngctc tgatntnnga tcgcatcntc attccganaa tggtctgttc ggctatcact 120
 ggagcgaggc taactctagg gangtctctn ncctcttcca cacaacatac gagnntcntc 180
 g 181

<210> 266
 <211> 342
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (2), (9), (21), (58), (216), (219), (230), (299)
 <223> unsure at all n locations

<400> 266
 anacactgnt aaagtgaaga nggtgaatgg agatgtgtct gagaacaaca aaggagggnag 60
 caaaccttca gcagaaatag atcttccaga tgctgaagtt ggaaaagttc gcttgcgatt 120
 tgcacctgaa ccaagtgggtt atcttcatat tggacactca aaagcagctt tgttgaacaa 180
 tatttttgctg agcgatacca gggtcaggtt attgtncgnt ctgatgatan caatcctgct 240
 aaagagagca atgaatttgt ggacaacctg attaaagata ttgatacatt gggcatcana 300
 tatgaacaaa ttacatatatac atcagattac ttccctgagt tg 342

<210> 267
 <211> 290
 <212> nucleic acid
 <213> Glycine max

<400> 267
 agctgccgga gataaagcta caacatatatac taaaaggata tggcttgacc ttgctgatgc 60
 agtgtcttta tcagcaggtg aggaagtaac attgatggat tggggaaatg ccatagttaa 120
 ggaaatagag aaggaccaag atggaaatat cataggggttg agtgggtgtt tgcatctaga 180
 aggatctgtg aagaccacaa aattgaaact cacttggtta cctgagatag atgaactagt 240
 tagcctgaca ttagtggagt ttgattatct aattacaaag aaaaagcttg 290

<210> 268

<211> 248
 <212> nucleic acid
 <213> Glycine max

<400> 268

tcggaattca gcgcgaggga tagcaatcct gctaaagtaa gcaatgaatt tgtggacaac 60
 cttatttaaag atggtgatac attgggtatc aaatatgaac aaatgacata tacgtcagag 120
 tacttccttg agttgatgga gatggctgaa aaattaattc gccagggtaa agcatatgtt 180
 gatgacacac cacgtgaaca aatgcaaaaa gagagattgg atggcataga ttctaaatgc 240
 agaaataa 248

<210> 269
 <211> 258
 <212> nucleic acid
 <213> Glycine max

<400> 269

ggcattgttg tgtggcgga cgccatgggc gaaggttact atttcacat tttccaccac 60
 tccacacccc ctgcacctt cttcttccaa cgacgcggt tctcagtctc tgctgctttc 120
 tccgaacaac aaccaccgcc acccggttcgc gtctgtttcg ctcttctcc caccggaaac 180
 ctccacgtcg gcggtgcccg aacggccctc ttcaactact tggtcgcaag gtccaaaggt 240
 gggaaatttg tgctgaga 258

<210> 270
 <211> 267
 <212> nucleic acid
 <213> Glycine max

<400> 270

actgagtaga tggagatgga tgaaaaatta gtctgccagg gaaaagcata tgttgatgac 60
 atagcacgtg aacaaatgca aaaagagaga atggatggca tagattctaa atgcagaaat 120
 aatagtgtag aggagaatct aaaattgtgg aaggaaatgt tggcaggaac agagaggggg 180
 ttgcagtgtt gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat 240
 cctgtttatt atcgttgcaa tccaatg 267

<210> 271

<211> 245
 <212> nucleic acid
 <213> Glycine max
 <400> 271
 tgatgcacga tttcctacag tgcaaggaat tgtgcgtaga ggtttgaaaa ttgaagccct 60
 gatacagttt attgttgagc agggggcgtc caaaaatctc aatctcatgg aatgggacaa 120
 gctctggacc attaataaga agattattga ccctgtctgt cctagacaca ctgctgtcat 180
 tgcagacaga cgtgttttgt tgactctcac tgatggtoct gagtatcctt ttgtccgcat 240
 catac 245

<210> 272
 <211> 280
 <212> nucleic acid
 <213> Glycine max
 <400> 272
 attgcaggaa cagagagggg cttgcagtgt tgtgtccgtg gcaagttgga tatgcaggac 60
 ccaaacaat cacttagaga tcctgtttat tatcgttgca atccaatgcc ccatcataga 120
 attggatcca agtataaagt gtatccaact tatgattttg cttgtccata tgttgattct 180
 atagaaggaa tcacgcatgc ccttcgatct agtgaatacc atgatcgcaa tgcccagtat 240
 tactggattc aagaggacat gggctcttaga aaagttctta 280

<210> 273
 <211> 276
 <212> nucleic acid
 <213> Glycine max
 <400> 273
 aggttgagtg gtgttttgca tcttgaagga tctgtgaaga ccacaaaatt gaaactcact 60
 tggctacctg agatagatga actagttagc ctgacattag tggagtttga ttatctaatt 120
 acaaagaaaa agcttgaaga agggaggatt tcattgatgt ggttaaccba tgtaccaaaa 180
 aggagacttt agcttatgga gactccaaca tgcgaaatct tcagcgtgga gattttattgc 240
 aactggagag aaagggatat ttcaggtgtg atttac 276

<210> 274

<211> 283
 <212> nucleic acid
 <213> Glycine max
 <400> 274
 agcagggtatt cgtgctgagt cagattctag agataattat tctcctggat ggaagtattc 60
 caactgggaa atgaaagggg ttcctctaag aattgaaatt gggccaaagg atttagcaaa 120
 taagcaggtc atcaactttg ccagtgtttt atcaattctc atatttgtca ttttgcttcc 180
 aactgttag tttttcagtg aacaccaa ataatctctt gaattttgca taggttcgca 240
 ctgttcgacg tgataatggt gcaaagatag acattgctag tgc 283

<210> 275
 <211> 403
 <212> nucleic acid
 <213> Glycine max
 <400> 275
 caaaaccatt tgcgttgctg cagtcgcagt caaaggccaa ggcaaaacc taaattgtct 60
 cacactttcg tcggaatccg cttttggctt tttccgtgac aagatgccgg cgaaggacga 120
 cggctccgac aaggagaagt gccttgatct ctttctgaaa atcggcttag acgagcgcac 180
 cgctaaaaac accgtcgcaa acaacaaagt caccgccaat cttactgcag tcatctacga 240
 ggccggtgtt attgatggat gcagccgagc ggttggaat cttctttaca cggttgcaac 300
 gaagtaccct gcaaatgcct tgccacatcg cccaacattg ctacagtaca ttgtctcgtt 360
 aaggtgaaaa caactgcaca gttagatgca gcattatcat ttc 403

<210> 276
 <211> 445
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (22), (36), (45), (53), (65) ... (66), (75), (85), (89), (92),
 (94) ... (95), (102), (105), (119), (145), (158), (171), (224),
 (238), (249), (291), (360), (365), (396), (428), (431), (444)
 <223> unsure at all n locations
 <400> 276

gagaaaaatgg cgctgctgtg angcggttgc catggnacga aggtnaatag tgnctctaca 60

tgtnnaatc aatcntaaca ccccnaggna cntnnttatt cnaangacgc aagtttctna 120
atctctgatg tctttagaac aacgnaacat ccgctcgnag tcgttttgct ncttctacaa 180
cggaaacctt acatatcggc atgttccacg aacggggccct cttnaactac ttgttcgnaa 240
ggtccaaang tggaaaattt gtgctgaata attgaggaca ctgacttgga naggtccagt 300
agggagttat gaggaggcca atgctcaaag atctttcttg gcttggactt gattgggatn 360
aaggnccctgg tgttgaacgg gattatggcc ttatangcag tctgagagga attcttatcc 420
aaccaatntc nggaaaacct acanc 445

<210> 277
<211> 277
<212> nucleic acid
<213> Glycine max
<220>
<221> unsure
<222> (26), (133), (215)
<223> unsure at all n locations
<400> 277

gtttattatc gttgcaatcc aatgcncat catagaattg gatccaagta taaagtgtat 60
ccaacttatg attttgcttg tccatatgtt gattctatag aaggaatcac gcatgccctt 120
cgatctagtg aancccatga ttgcaatgcc cagtattact ggattcaaga ggacatgggt 180
cttagaaaag ttcttatcta cgaatttagc cggtnccaat atggtctaca ctcttctgag 240
caaacgaaag cttttgtggt ttgtacaaaa tgggaaa 277

<210> 278
<211> 255
<212> nucleic acid
<213> Glycine max
<400> 278

agattctaga gataattatt ctcttgatg gaagtattct aattgggaaa tgaaagggtg 60
tcctctaaga attgaaattg ggccaaagga tttagcaaat aagcagggtc gtgctgttcg 120
acgtgataat ggagcaaaga tagcattgct agtgctgatt tggttgtgga aataaaaaag 180
ttgcttgata ctattcaaca gaacctgttt gatgttgcaa acaaaaaacg agatgaatgc 240

attcagatca tacac 255

<210> 279
 <211> 258
 <212> nucleic acid
 <213> Glycine max

<400> 279

agattctaga gataattatt ctcttgatg gaagtattct aattgggaaa tgaaaggtgt 60
 tcctctaaga attgaaattg ggccaaagga tttagcaa at aagcaggttc gtgctgttcg 120
 acgtgataat ggagcaaaga tagacatgct agtgctgatt tggttgtgga aataaaaaag 180
 ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240
 attcagatca tacacact 258

<210> 280
 <211> 265
 <212> nucleic acid
 <213> Glycine max

<400> 280

agattctaga gataattatt ctcttgatg gaagtattct aattgggaaa tgaaaggtgt 60
 tcctctaaga attgaaattg ggccaaagga tttagcaa at aagcaggttc gtgctgttcg 120
 acgtgataat ggagcaaaga tagacattgc agtgctgatt tggttgtgga aataaaaaag 180
 ttgcttgata ctattcaaca gaacctgttt gatgttgcaa aacaaaaacg agatgaatgc 240
 attcagatca tacacacttg ggatg 265

<210> 281
 <211> 264
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (180), (255)
 <223> unsure at all n locations

<400> 281

tcctgctaaa gaaagcaatg aatttgtgga caaccttatt aaagatattg atacattggg 60
 tatcaa atat gaacaaatta catatacgtc agattacttc cctgagttga tggagatggc 120

tgaaaaatta attcgccagg gtaaagcata tgttgatgac acaccacgtg aacaaatgcn 180
 aaaagagaga atggatggca tagattctaa atgcagaaat aatagtgtag aggagaatct 240
 aaaattgtgg aaggnaatga ttgc 264

<210> 282
 <211> 263
 <212> nucleic acid
 <213> Glycine max

<400> 282

cctgattaaa gatattgata cattgggcat caaatatgaa caaattacat atacatcaga 60
 ttacttcctt gagttgatgg aaatggctga aaaattaatt cgcgagggtg aaacatatgt 120
 tgatgacact ccacgtgaac aaatgcaaaa agagagaatg gatggcatag aatctaaatg 180
 cagaaataat atagtagagg agaattctaaa actgtggaag gaaatgattg caggaacaga 240
 gaggggattg cagtgttgtg tcc 263

<210> 283
 <211> 267
 <212> nucleic acid
 <213> Glycine max

<400> 283

ttgggcatca aatatgaaca aattacatat acatcagatt acttccctga gttgatggaa 60
 atggctgaaa aattaattcg cgagggtaaa acatatgttg atgacactcc acgtgaacaa 120
 atgcaacaag agagaatgga tggcatagaa tctaaatgca gaaataatat agtagaggag 180
 aatctaaaac tgtggaagga aatgattgca ggaacagaga ggggattgca gtgttgtgtc 240
 cgtggcaagt tggatatgca ggaccca 267

<210> 284
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<400> 284

atgggagttc agcaaaccga ctccattcat caggagtcgc gagtttcttt ggcaagaagg 60
 gcacactgct tttgcaacaa aggatgaagc agatgcagag gttcttgaga ttctggaatt 120

atataggcgt atatacgaag agatttggca gttcctgtca taaagggtaa gaaaagtgag 180
 cttgagaagt ttgctggtgg actctacact accagtgttg aggcatttat tccaaacact 240
 ggtcgtggta tccaaggtgc aacttctca 269

<210> 285
 <211> 422
 <212> nucleic acid
 <213> Glycine max

<400> 285

gtccaaacgg cagcgagaag acgacagaag gggtcagatg ggagttcagc aacccccactc 60
 cattcatcag gagtcgtgag tttctttggc aagaagggca cactgctttt gcttcaaagg 120
 aggaagcaga tgcagagggt cttgagattc tggaattata taggcgtata tacgaagagt 180
 atttggcagt tcctgtcata aagggtgaaga aaagtgagct tgagaagttt gctggtggac 240
 tctacactac tagtgttgag gcattttattc caaacactgg tcgtggtata caaggtgcaa 300
 cttctcattg tttgggccaa aattttgcta aaatgtttga gataaacttt gaaaatgaaa 360
 agggagagag agcaatgggc tggcagaatt catgggccta tagtactcga actatcggtg 420
 tc 422

<210> 286
 <211> 240
 <212> nucleic acid
 <213> Glycine max

<400> 286

aaattatata ggcgtatata cgaagagtat ttggcagttc ctgtcataaa gggtaagaaa 60
 agtgagcttg agaagtttgc tgggtggactc tacactacca gtgttgaggc atttattcca 120
 aacactgggtg tggatatocaa ggtgcaactt ctcatgtttt gggccaaaat tttgctaaaa 180
 tgtttgagat aaactttgaa aatgaaaagg gagagaaagc aatggtcttg cagaattcat 240

<210> 287
 <211> 378
 <212> nucleic acid
 <213> Glycine max

<400> 287

ggaggctaca atttttgagc tacgttatcg aacaaatgtg ggtgagttgc ttgggcgtgt 60
 gcgcaaagag ctgccatggg gtgatgcaaa agttgccaag caacttggtg atgcgcaact 120
 atatgaacta cttggtgatc ggacagcagc agatgatgaa aagccttcta gaaagaagaa 180
 ggagaaacct gctaaagtag aggataaggc agctcctggt tctaccctg aaaagtcacc 240
 tgaagaagac gttaatccat ttttaatat ccctaatacca gaggaaaatt tcaagggtgca 300
 tactgaagtg ccttttagtg atggtagtat ttgagatgt tgcaatacaa gagatctgct 360
 tgacaaacac ttaaaagc 378

<210> 288
 <211> 269
 <212> nucleic acid
 <213> Glycine max

<400> 288
 aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60
 aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120
 gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat cctgtatatatt 180
 atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240
 atgatttcgc ttgtccatat gttgatgct 269

<210> 289
 <211> 258
 <212> nucleic acid
 <213> Glycine max

<400> 289
 aacaaatgca aaaagagaga atggatggca tagaatctaa atgcagaaat aatatagtag 60
 aggagaatct aaaactgtgg aaggaaatga ttgcaggaac agagagggga ttgcagtgtt 120
 gtgtccgtgg caagttggat atgcaggacc caaacaatc acttagagat cctgtatatatt 180
 atcgttgcaa tccaatgccc catcatagaa ttggatccaa gtataaagtg tatccaactt 240
 atgatttcgc ttgtccat 258

<210> 290
 <211> 251

<212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (65)
 <223>

<400> 290

aggcgatctc gggtgggaag cggggaagat ggggaagctt gtaattaagc atttggctgc 60
 caacncggtg cagaagaatg gttgttggtta acaggactga agagaaagtt aatgccattc 120
 ggaaagagtt gaaggatggt gagattgtat ttagaccatt ttcagatatg ctggcgtgtg 180
 ctgctgaagc tgatgtgatc ttcaccagca cagcgtctga atcaccatgt tctctaaaca 240
 gaatgtgcag a 251

<210> 291
 <211> 240
 <212> nucleic acid
 <213> Glycine max

<400> 291

atttgcatag ggctgaacat tcacactgct cccgttgaga tgcgtgagaa gcttgcaatt 60
 ccagaatccc attgggctca ggctattaag gacctttgcg ctttgaacca tatcgaagaa 120
 gccgcggttc tcagcacgtg taaccgcatg gagatctatg ttgtggctct tccccagcac 180
 cgtggtgtta aggaagttac tgattggatg tctaagggtga gcgggatttc aatacctgag 240

<210> 292
 <211> 275
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (105), (240), (264), (269), (271)
 <223> unsure at all n locations

<400> 292

aggaagcagc tgttctgagc acctgcaaca gaatggaaat atatgttggt gctctgtcca 60
 agcaccgtgg tgtaaagaa gtcactgaat ggatgtccaa aacangtggg attccagttg 120
 cagatctttg ccagcatcag tttctgctat acaacaaaga tgccacacaa cacctttttg 180

aagtatctgc aggtcttgat tctctagtgt tgggagaagg tcaatccttg cccaggtgan 240
gcaggttgtc aatttggaca aggnnttaang ncttc 275

<210> 293
<211> 276
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (40)...(41),(43)...(46),(62),(64),(66),(72),(74),(78),
(87),(92),(101),(111),(132),(160),(203)
<223> unsure at all n locations

<400> 293

ggtaagaact tgagacaaaa cattgctgct ggtgcagtan ncnnnnagtt catcaactgt 60
antncnggga cntnattnag gctaccngaa gnctcacatg ncatgcaagg ntgttggtca 120
ttggagctgg gnagatcgga agcttgtgat caagcatttn gtggcaaaaag ggtgcacaaa 180
gatggtggtt gtcataagagt gangagagag ttgccgcgat ccgtgaagaa atcaagatgt 240
tgagataatc tacaagccac tctcggagat gctcac 276

<210> 294
<211> 271
<212> nucleic acid
<213> Glycine max

<400> 294

ctcgagcgga ataagctact tcatgggtccc atgcagcacc taaggtgtga tgggaacaat 60
gatagtagtc tgagtgaagt acttgagaat atgcgcgccc ttaacagaat gtatgatctt 120
gagacagaaa ottccttgat cgaagaaaag atcagagtca agatggaacg ggttcagaag 180
tagattcttc ttcaattggt ttagttttac ttgattactg tgggggctgc aatcctcgcc 240
attttgtaca ctacagtagt tgattgaggc c 271

<210> 295
<211> 130
<212> nucleic acid
<213> Glycine max

<400> 295

ggcaatcatt gctgaagaat ctaagcaatt tgaagcttgg agggactcgc tggaaactgt 60
 tcctactatt aagaaattga gggcttatgc tgaaagaatc aggcttgctg agcttgagaa 120
 gtgcttaggt 130

<210> 296
 <211> 426
 <212> nucleic acid
 <213> Glycine max

<400> 296

cccacgcgtc cgaacatttg gtggcaaaag gttgcaaaaa gatggtgggt gtcaatagaa 60
 ctgatgagag agttgctgca atacgtgaag aactgaagga tattgagatt atctacaaac 120
 ccccttcaga aatgctcacc tgtgctggcg aagcagatct agttttcacc agtactgcat 180
 cagaaaaccc attattcttg aaagaacatg tcaaggacct tcctcctgca agtcaagaag 240
 ttggaggccg tcgctttttc attgatatct ctgttccccg gaatgtgggt tcatgtgtct 300
 cagaccttga gtctgtgcga gtttacaatg ttgacgacct taaagagggt gtggctgcca 360
 ataaagagga tcgcctaaga aaagcaatgg acgcacaggc aatcattgct gaaaaatcta 420
 agcaat 426

<210> 297
 <211> 271
 <212> nucleic acid
 <213> Glycine max

<400> 297

aggataggct aagaagagcc atggaggctc aagcaatcat tggatgaagaa tcaaaacaat 60
 ttgaggcttg gagagactca ttggaaactg ttcctaccat taaaaagttg agggcatatg 120
 ctgaaagaat aaggcttgct gagcttgaga agtgcctagg taagatgggt gatgatatca 180
 acaagaagac acaaagagct gtggatgatc ttagcagggg tatagtgaat aagttgcttc 240
 atgggccaat gcaacacttg aggtgtgatg g 271

<210> 298
 <211> 266
 <212> nucleic acid
 <213> Glycine max

<400> 298
 agaaaagcca tggaggctca agcaatcatt ggtgaagaat caaaacaatt tgaggcttgg 60
 agagactcat tggaaactgt tcctaccatt aaaaagttga gggcatatgc tgaaagaata 120
 aggcttgctg agcttgagaa gtgcctaggt aagatgggtg atgatatcaa caagaagaca 180
 caaagagctg tggatgatct tagcaggggt atagtgaata agttggcttc atgggccaat 240
 gcaacacttg agtgtgatgg cagtga 266

<210> 299
 <211> 289
 <212> nucleic acid
 <213> Glycine max

<400> 299
 cacaattctc ccttcaaagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60
 gaggctttgt tgctgaaatg tggttcctcc aatgctgcc aaccaccac tcatatatca 120
 tgttttggca aaaacagaaa gacacttggt cagagtcaga gaggggctat tcgttgtag 180
 gcttcttctg cttctgatgt tgtggctgat gccaccaaga aagctgctag tgtctctgct 240
 cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaagga 289

<210> 300
 <211> 289
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (17), (77), (187), (230), (279)
 <223> unsure at all n locations

<400> 300
 cacaattctc ccttcanagt ttcaatggct gtttcaacca gcttctcggg tgtaaagttg 60
 gaggctttgt tgctganatg tggttcctcc aatgctgcc aaccaccac tcatatatca 120
 tgttttggca aaaacagaaa gacacttggt cagagtcaga gaggggctat tcgttgtag 180
 gcttctnctg cttctgatgt tgtggctgat gccaccaaga aagctgctan tgtctctgct 240
 cttgagcagc ttaagacctc tgcagctgat aggtatacna aggaaagga 289

<210> 301
 <211> 266
 <212> nucleic acid
 <213> Glycine max

<400> 301

cagggcttga ctcacttggt cttggggaag gtcaaattct tgctcaggtg aagcagggtg 60
 tgaaagctgg acagggagtg cctgggtttg ataagaaaat cagtgggttg ttcaagcagg 120
 cgatatcggg tgggaagcgg gttagaaccg agactaacat ttcactctga tcagtttctg 180
 taagctcggc tgctgtggag cttgcactga tgaagctacc ggaaattacc tttgctgatt 240
 ctggagtgtt ggtgggttgg gctggg 266

<210> 302
 <211> 275
 <212> nucleic acid
 <213> Glycine max

<400> 302

cgcgcacatc tatttgaagt ggcgtcaggg cttgactcac ttgttcttgg ggaagggtcaa 60
 attcttgctc aggtgaagca ggttgtgaaa gctggacagg gaggccttg ttttgataag 120
 aaaatcagtg gtttggtcaa gcaggcgata tcggttgga agcggggttag aaccgagact 180
 aacatttcat ctggatcagt ttctgtaagc tcggctgctg tggagctgca ctgatgaagc 240
 taccggattc ctcctttgct gattctggag tggtg 275

<210> 303
 <211> 288
 <212> nucleic acid
 <213> Glycine max

<400> 303

cttgagcagc ttaagacctc tgcagctgat aggtatacaa aggaaaggag cagcatcatg 60
 gttattggac tgagtgtgca tagtacacct gtggaaatgc gtgaaaaact tgccatacca 120
 gaagcagaat ggccaagagc cattgcggag tttgtagtct gaatcatatt gaggaagcag 180
 ctgttctgag cacctgcaac agaattggaga tatatgttgt tgctctgtcc aagcaccgag 240
 gtgtcaaaga agtcactgaa tggatgtcca aaacaagtgg gatcccgg 288

<210> 304
 <211> 299
 <212> nucleic acid
 <213> Glycine max
 <400> 304
 agtgtgcata gtacacctgt ggaaatgcgt gaaaaacttg ccataccaga agcagaatgg 60
 ccaagagcca ttgcgaggtt tgtagtctga atcatattga ggaagcagct gttctgagca 120
 cctgcaacag aatggagata tatgttggtg ctcttccaag caccgcgttg tcaaagaagt 180
 cactgaatgg atgtccaaaa caagtgggat cccggttgca gacctttgcc agcatcagtt 240
 tctgctatac aacaaagatg cgacacagca cctttttgaa gtatctgctg gtcttgatt 299

<210> 305
 <211> 260
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (135), (171), (185), (203), (217), (232), (235)
 <223> unsure at all n locations
 <400> 305
 gagcagcatc atgggtattg gactgagtgt gcatagtaca cctgtggaaa tgcgtgaaaa 60
 acttgccata ccagaagcag aatggccaag agccattgag gagtttgtag tctgaatcat 120
 attgaggaag cagcngttct gagcacctgc aacagaatgg agatatatgt ngttgctctg 180
 tccangcacc gcggtgtcaa agnagtcact gaatggntgt ccaaaacaag tnggntcccg 240
 gttgcagact ttgccagcat 260

<210> 306
 <211> 440
 <212> nucleic acid
 <213> Glycine max
 <400> 306
 gggttctcct gaatccgcaa tggccgtttc aaccactttc tccggtgcca aattggaggg 60
 gctattgctc aaatgttctt cctcctcttc ctaccaccg ccttcaaggt catcattcac 120
 cacttttccc ggccaaaaca gaagaaccct cattcagaga ggggttattc gctgcgacgc 180

tcagccctct gatgcatcat ctgttgetcc aaataatgcc accgctctct ccgctcttga 240
gcagctcaag acttctgcag ctgatagata taaaaaggaa agaagcagca ttatcgccat 300
tggtgtcagt gtgcacactg cacctgtgga aatgcgtgaa aaacttgcca ttccagaagc 360
agaatggcct agagctattg cagagctgtg tagtctgaat catatttgag aagcagctgt 420
tctgagtacc ctgcatcgaa 440

<210> 307
<211> 272
<212> nucleic acid
<213> Glycine max

<400> 307

ctgaaatcaa ggttgttgct ggtgaccctt ataactcaga ccacaagat ccagaattca 60
tggtgttga agtcagagag cgtgtacttc caaggagagg aactttctgt tgtcttgacc 120
aaaattaaca tggttgattt gcattgggag ctacagaaga tagagtgtgt ggaacaattg 180
acattgagaa agccctgact gaggggtgtca aggcatttga gcttgacta tggctaaagc 240
taatagggga atctatatgt tgatgaagtt aa 272

<210> 308
<211> 254
<212> nucleic acid
<213> Glycine max

<400> 308

gtcttacaac ggcttttagag ttggactaaa tgcggagaaa agtggtgacg ttggacgtat 60
aatgattgtt gcaatcactg atggcagagc caatatatca ttgaaaaggt caactgaccc 120
tgaagctgcc gcagctactg atgccccaaa accttcagca caagaattga aggatgaaat 180
tcttgagggtg gccggaaaga tatataaagc aggaatgtct ctccttgtca tcgacactga 240
aaataagttt gtct 254

<210> 309
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 309

actttctgtt gtcttgacca aaattaacat ggttgatttg ccattgggag ctacagaaga 60
tagagtgtgt ggaacgattg acattgagaa agccctgact gaggggtgtca aggcatttga 120
gcctggacta ctggctaaag ctaatagggg aatcttatat gttgatgaag ttaatctttt 180
ggatgatcac ttggtggatg tgttgttgga ttctgctgcg gatggaacac agtagagaga 240
gaggggaattt cta 253

<210> 310
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 310

tgttactctt aacagagAAC aattaaaata cctggttatt gaagctttac ggggcggttg 60
ccagggacat agagctgac tatttgctgc ccgtgttgca aagtgccttag ctgcttttga 120
gggacgtgaa aaggtttatg tggatgacct aaaaaaagct gtagaattgg tcattctacc 180
ccggtcaatc gttactgaga acccaccaga tcaacaaaac cagcctcctc cccctccgcc 240
tcctccacaa aat 253

<210> 311
<211> 162
<212> nucleic acid
<213> Glycine max

<400> 311

gcatgatgat ctccacatgt ctgtctgtca actaaaacac tattgcgttt catgatatat 60
caaattgtga acatgctatg tggttaatgtt tctttaaagc ataatccata gccccttatg 120
tttaaatcaaa ccaaaattat gccctagttt tttttttttt gg 162

<210> 312
<211> 232
<212> nucleic acid
<213> Glycine max

<400> 312

aaaaaagaac agagagagaa gaatgaaatc tatctatctt cttatccgaa gtctgggagg 60
ccaataggaa gcacgccagc tgctacgaat ggtgaataaa agacaaaaga aacaaaactgc 120

tacatagcat acagtctgtc ttctcttctc ttctccggtt atggcgctcg ccttgggcac 180
 ttcttcaatt gcggttctgc cttcgcgcta cttctcttct tcttcttcca ag 232

<210> 313
 <211> 262
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (44),(115)
 <223> unsure at all n locations
 <400> 313

cacttaatcc aggctcagaa gattgctttt aacgagagcc agangccggt gtacccattt 60
 tctgctatag tgggacacga tgagatgaag ctttgccttc tctaaatgt aattnatccc 120
 aagattggag gtgtaatgat catggggggac agaggaacgg ggaaatctac aactgtttaga 180
 tcattggtag atttgcttcc tgaaatcaag gttgttgctg gtgaccatat attcagaccc 240
 agaggatcca gattcatggg tg 262

<210> 314
 <211> 280
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (187)
 <223>
 <400> 314

actctctcta acttcagggc agagctatgg gcggaaattt tatggaggaa ttggaattca 60
 tggcatcaag ggaaggtctc agctctcagt tgccaatggt gccactgaag ttaactctgt 120
 agaacaggcc caaagtattg cttctaaaga aagccagagg ccagtatacc cattttctgc 180
 catagtngga caagatgaga tgaagctttg tcttctcctt aatgtgattg atcctaagat 240
 tggaggtgta atgatcaggg ggataggggc acagggaat 280

<210> 315
 <211> 238

<212> nucleic acid
<213> Glycine max

<400> 315

ttttgctcgg aatttctctgt gtagaaggaa ctcatgaatc ttattgatgt ttaacgacaa 60
tgaaaatctc cacagaaaag gtaaaatgta aataatgaag tagcattata ctcatggaat 120
accacagaat acaaaccgtg ttacatctat gatcctcagc tgaatacctc ataaaatttc 180
tcagtgacaa gtaaacctga gtctatagac tccaagggat cctttctaag acggtgtc 238

<210> 316
<211> 273
<212> nucleic acid
<213> Glycine max

<400> 316

ttagggaagg gctcagctct cggttaccaa tgttgccact gaagttaact ctgtagaaca 60
ggctcagagt attgcttcta aagaaagcca gaggccagta taccattttt ctgccatagt 120
tggaacaagat gagatgaagc tttgtcttct ccttaatgtg attgaccta agattggagg 180
tgtaatgatc atgggggata ggggcacagg gaaatctaca acggtcagggt cattggttga 240
tttacttccc gaaatcaagg ttgttgctgg tga 273

<210> 317
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 317

agactcattg gatcggttga tgttgaggag tctgtgaaaa caggcacaac tgttttccag 60
ccaggcttgc ttgcagaagc tcatagaggt gttttatatg ttgatgaaat taatcttttg 120
gatgagggtg tcagtaattt gtccttact gtattgagtg aaggagtaaa tactgttgaa 180
agagagggga tcagtttcaa gcacccttgc agggcccttc tcattgccac ctataaccga 240
gaagaggggtg ctgttcgtga acatctgctg gaccgcattg cga 283

<210> 318
<211> 173
<212> nucleic acid
<213> Glycine max

<220>
 <221> unsure
 <222> (14), (18)
 <223> unsure at all n locations

<400> 318

gctcgagggcg ccgntcanac gacgagccgc gaggcggtgg cggcgtggga cgaggtggag 60
 gagctgagcg cggcggcgag ccacgccaaa tacaagctaa aggaaaagga ctccgacccg 120
 ctcgagacct actgcaagga caatccggag accattgagt gcaaaacttt cga 173

<210> 319
 <211> 263
 <212> nucleic acid
 <213> Glycine max

<400> 319

aggaattccg agattcttac aaagccgagc aagagaagct ccaacaacaa attacatcag 60
 caaggagtgt tctttcttct gttcagattg atcaagatct caagggtgaaa atctccaagg 120
 tgtgtgctga gttgaatgtg gatggattaa gaggagacat agtaacaaat agagctgcaa 180
 aagctcttgc tgctctgaag gaaagagaca aagtaagtgc agaggatatt gctactgtca 240
 tccctaactg cttgagacac cgt 263

<210> 320
 <211> 322
 <212> nucleic acid
 <213> Glycine max

<400> 320

atagcttttg gagcaaaaac tgcacaaagc tcctcagtgc cccccaagtt ttcctttcaa 60
 agcaattttg tgctttgctt tgaatgtctt ccttttcgat ccctacactt caatttgtag 120
 caagaggaat ttgttgtttc ctacttagca tgattattta tcaatggcgt ctttggtatc 180
 ttcagcattt actcttccaa gctctaaacc tgaccagctt caatcacttg ccccgaacaa 240
 tctttttcat cagtcattcc ttcccaagaa agccaattac aatggtagct caaaatcctc 300
 tctgaaaatt aaatgtgtg tc 322

<210> 321

<211> 410
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (20), (37), (119)
 <223> unsure at all n locations

<400> 321

cagtcattac ttgactcan accccgacta atctggntca gaatctaagg aaagatggga 60
 agaagcctag tgcatacatt gctgatacaa ccacagccaa tgctcaggta cgtacactnt 120
 ctgagacggg tagacttgac gcaagaacca agctgttgaa tccaaagtgg tatgaaggca 180
 tgttggtctac tggatatgag ggtgtacgag agatcgagaa gagactcacc aatacagtgg 240
 ggtggagtgc aacttcaggc caagttgata actgggtgta tgaagaagcc aacacaactt 300
 tcattcaaga tgagcaaagc ctgaacaagc tcatgagcac taatccaaac tccttcagga 360
 aactggtgca gacattcttg gaagccaatg gacgtgggta ttgggaaact 410

<210> 322
 <211> 324
 <212> nucleic acid
 <213> Glycine max

<400> 322

gaaaaataac acacatttga aactcaaact gaaatgggtg catagctttg gggcaaaaac 60
 tacacaaaac tcctcattgc cccaagttt tttctttcaa agcaattttg cacttttttg 120
 ctttcattgt cttcaatttg tagtaagagg aaattggtgt ttctactta gcttgattat 180
 tattatcaat ggcttcttta gtatcttcac aatttacact accaagttct aaacctgacc 240
 agcttcattc tottgctcag aagcatcttt ttctccactc tttccttccc aagaaggcca 300
 attacaatgg tagcagctca aaat 324

<210> 323
 <211> 340
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (290)

<223>

<400> 323

gaagaagtaa tacatgacaa agaagctcaa tttagcagcc caaatctgaa cgttgcttac 60
 aaaatgaatg tccgagaata ccaaagtcta actccctatg ccacagcatt agaagaaaac 120
 tggggaaaac ctcttgggaa tctgaattca gatggagaga atctattggt atatgggaaa 180
 caatatggta atgtattcat aggtgttcaa cccacatttg gctatgaagg cgatcctatg 240
 cggttgcttt tctccaaatc tgcaagtcct catcatggat ttgcagcatn atactctttt 300
 gtttgagaaa ttttcaaagc tgaagcgggt cttcattttg 340

<210> 324

<211> 264

<212> nucleic acid

<213> Glycine max

<400> 324

ggcgaagaac agaatgaaga ggaagaacaa gaggatgaca aggatgaaga gaatgaacaa 60
 cagcaagaac aattacctga agagtttatac tttgatgctg aaggtggctt ggtagatgaa 120
 aaactcctct tctttgcccc acaagcacag agacgccgtg ggagggctgg aagggcaaaa 180
 aatgttatat tttccgagga tagaggccga tacatcaagc ccatgcttcc aaagggccct 240
 gtaaagagat tagctgtaga tgca 264

<210> 325

<211> 246

<212> nucleic acid

<213> Glycine max

<400> 325

caaatcaag aatcaggcga agaacagaat gaagaggaag aacaagagga tgacaaggat 60
 gaagagaatg aacaacagca agaacaatta cctgaagagt ttatctttga tgctgaagg 120
 ggcttggttag atgaaaaact cctcttcttt gcccaacaag cacagagacg ccgtgggagg 180
 gctggaaggg caaaaaatgt tatatcttcc gaggatagag gccgatacat caagcccatg 240
 cttcca 246

<210> 326

<211> 264
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (2),(16)
<223> unsure at all n locations

<400> 326

cnagagcaga gaagantcag agaatggcaa ctatgactgg cgtgagcctt tcatgcccc 60
gggttttctt caacgcatca ggctcaccgc aaaacgcgca tgcttattgt attttgtcca 120
gcagattcta tgacttgaca ggactgcaga atggaattct gaagcgaggg agagagattt 180
tcctcactgg ttgctacctc cgaactccca ctggagggttc tggacattca cgtcttttgc 240
caacagagta tcttgtgatt ctat 264

<210> 327
<211> 284
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (34)...(35),(42),(182)...(183)
<223> unsure at all n locations

<400> 327

cagagaagaa tcagagaatg gcaactatga ctgnngtgag cntttcatgc cccagggttt 60
tcttcaacgc atcaggctca ccgcaaaacg cgcattgctta ttgtattttg tccagcagat 120
tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag attttcctca 180
cnngttgcta cctccgaact cccactggag gttctggaca ttcacgtctt ttgccaacag 240
agtatcttgt gattctattg gatgaagact tccagaagga aatt 284

<210> 328
<211> 392
<212> nucleic acid
<213> Glycine max

<400> 328

ggccgataca tcaagcccat gcttccaaag ggccctgtaa agagattagc tgtagatgca 60

acccttagag ctgctgcacc ttatcaaaaa ttgcgaaggg caaaagattc tggaaacaat 120
 agaaaggat tatgtggagaa aacggacatg agggcaaaga gaatggcacg taaggcagga 180
 gcattggtga tatttgttgt tgatgcaagt ggaagcatgg cattgaacag gatgcagaat 240
 gcaaaagggtg cagcacttaa gcttctggct gaaagttata caagcaggga tcaggtatct 300
 ataattccat tccgtggaga tgcagctgaa gttctcctgc caccttctag atcaatttca 360
 atggcaagga aacgtcttga aaggcttcca tg 392

<210> 329
 <211> 274
 <212> nucleic acid
 <213> Glycine max

<400> 329

gtggagaaaa cggacatgag ggcaaagaga atggcacgta aggcaggagc attggtgata 60
 tttgttgttg atgcaagtgg aagcatggca ttgaacagga tgcagaatgc aaaagggtgca 120
 gcacttaagc ttctggctga aagttataca agcagggatc aggtatctat aattccattc 180
 cgtggagatg cagctgaagt tctcctgcc ccttctagat caatttcaat ggcaaggaaa 240
 cgtcttgaaa ggcttccatg tgggtggaggt cccc 274

<210> 330
 <211> 247
 <212> nucleic acid
 <213> Glycine max

<400> 330

attagctgta gatgcaaccc ttagagctgc tgcaccttat caaaaattgc gaagggcaaa 60
 agattctgga aacaatagaa aggtatttgt ggagaaaacg gacatgaggg caaagagaat 120
 ggcacgtaag gcaggagcat tggatgatt tgttgttgat gcaagtggaa gcatggcatt 180
 gaacaggatg cagaatgcaa aagggtgcagc acttaagctt ctggctgaaa gttatacaag 240
 cagggat 247

<210> 331
 <211> 292
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (2), (29), (34), (214), (217)
 <223> unsure at all n locations

<400> 331

tngagggcaa agagaatggc acgtaaggna ggancatcgg tgatatttgt ggttgatgca 60
 agtggaagca tggcattgaa caggatgcag aatgcaaaag gtgcagcact taagcttctg 120
 gctgaaagtt atacaagcag ggatcaggtc tctaaattcc attccgtgga gacgcagctg 180
 aagttcttct gccaccttct agatcaattg caancgnaag gaaacgtctt gagaggctcc 240
 atgtggtgga ggggtcccccac ttgctcaggt ctacaacggc tgttagagtt gg 292

<210> 332
 <211> 378
 <212> nucleic acid
 <213> Glycine max

<400> 332

agacgggtgc gagaagacga cagaagggga taagtgccat aacacataaa cagaatggct 60
 tccacgtttg ggcgcatctc aattaccttc ctctcttcac gatactactc gtctcaggcc 120
 cttgccaccg attcaccctc tctaaccaca gtgcagatat ttgggcgcaa gttttgcgga 180
 ggaagaaatg gatttcacag cgtcaaggga aggtctctgt tcgcggttgc gagtgttctt 240
 gccactcaac ttaactctgc ataataggct cagaagattg cttttaccga gagccagagg 300
 tcagtgtacc cattttcggc tatagttgga caggatgaaa tgaagctttg ccttctccta 360
 aatgtgattg atcccaaa 378

<210> 333
 <211> 277
 <212> nucleic acid
 <213> Glycine max

<400> 333

aaaaagaatg gcttccacgt ttggcgcatc ttcaattacc ttctctctt cagatacta 60
 ctcttcccaa tcccttgcca ccgattctcc ctctctaacc acagtgcaga tatttgggcg 120
 caagttttgc ggcggaggaa atggatttca cagcgtcaag ggaaggtctc tgttcccggc 180
 tgcgagtgtt cttgccactc aacttaactc tgcacaacag gtcagaaga ttgcttttac 240

cgagagccag aggccagtgt acccatttcg gctatag 277

<210> 334
<211> 256
<212> nucleic acid
<213> Glycine max

<400> 334

taaaaagaat ggcttccacg tttggcgcat cttcaattac cttcctctct tcacgatact 60
tctcttccca atcccttgcc accgattctc cctctctaac cacagtgcag atatttgggc 120
gcaagttttg cggcggagga aatggatttc acagcgtcaa gggaaggtct ctgttcccg 180
ttgcgagtgt tcttgccact caacttaact ctgcacaaca ggctcagaag attgctttta 240
ccgagagcca gaggcc 256

<210> 335
<211> 396
<212> nucleic acid
<213> Glycine max

<400> 335

ggcaactatg actggtgtga gcctttcatg cccaggggtt ttcttcaacg catcagcctc 60
accgcaaaac gcgcagtctg taaagtcttc acttccaccc agccaagcag tgcgaccggg 120
tagtatcaag ttgggtcgcg tgatgaggat ccgaccggtt cgcgctgcgc ctgagcgcat 180
atcggagaag gtggaggaga gcataaagaa cgcgcaggag gcgtgcgccg gcgatccgac 240
gagcggcgag tgcgtggcgg cgtgggacga ggtggaggag ctgagcgcg 300
cgccagggac aagcaaaagg aaaaggactc cgaccgctc gagaattact gcaaggacaa 360
cccggagacc attgagtgca aaactttcga agactg 396

<210> 336
<211> 356
<212> nucleic acid
<213> Glycine max

<400> 336

gagaatggca actatgactg gtgtgagcct ttcattgccc aggggtgtct tcaacgcatg 60
agcctaccg cataacgcgc atgctgtaaa gttctcactt ccaccagcc aagcagtgcg 120

accgggtagt atcaagttgg gtcgctgat gaggatccga cccgttcgcg ctgcgcctga 180
 gcgcataatcg gagaaggtgg aggagagcat aaagaacgcg caggaggcgt gcgccgacga 240
 tccgacgagc ggcgagtgcg tgacggcgctg ggacgaggtg gaggagctga gcgcggcggc 300
 tagccacgcc agggacacgc aaatggtaat ggacttcgac ccgctcgaga attact 356

<210> 337
 <211> 273
 <212> nucleic acid
 <213> Glycine max

<400> 337

agaatggcaa ctatgactgg tgtgagcctt tcatgccccca gggttttctt caacgcatca 60
 gcctcaccgc aaaacgcgca tgctgtaaag ttctcacttc caccagcca agcagtgcga 120
 ccgggtagta tcaagttggg tcgctgatg aggatccgac ccgttcgcgcg tgcgcttgag 180
 cgcatatcgg agaaggtgga ggagagcata aagaacgcgc aggaggcgtg cgccggcgat 240
 ccgacgagcg ggcgagtgcgt ggcggcgctgg gac 273

<210> 338
 <211> 272
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (126)
 <223>

<400> 338

aagaatcaga gaatggcaac tatgactggt gtgagccttt catgccccag ggttttcttc 60
 aacgcatcag cctcaccgca aaacgcgcat gctgtaaagt tctcacttcc accagccaa 120
 gcagtncgac ccggtagtat caagttgggt cgcgtgatga ggatccgacc cgttcgcgct 180
 gcgcctgagc gcatatcgga gaaggtggag gagagcataa agaacgcgca ggaggcgtgc 240
 gccggcgatc cgacgagcgg cgagtgcgtg gc 272

<210> 339
 <211> 273
 <212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> (175)

<223>

<400> 339

gaatcagaga atggcaacta tgactgggtgt gaggctttca tgccccagg ttttcttcaa 60
cgcatcagcc tcaccgcaaa acgcgcatgc tgtaaagttc tcacttccac ccagccaagc 120
agtccgaccg ggtagtatca agttgggtcg cgtgatgagg atccgaccg ttcgngtgcg 180
cctgagcgca tatcggagaa ggtggaggag agcataaaga acgcgcagga ggcgtgcgcc 240
ggcgatccga cgagcggcga gtgcgtggcg gcg 273

<210> 340

<211> 253

<212> nucleic acid

<213> Glycine max

<400> 340

cagagaatgg caactatgac tgggtgtgagc ctttcatgcc ccagggtttt cttcaacgca 60
tcagcctcac cgcaaaacgc gcatgctgta aagttctcac ttccaccag ccaagcagtg 120
cgaccgggta gtatcaagtt gggtcgcgtg atgaggatcc gaccggttcg cgctgcgcct 180
gagcgcatat cggagaaggt ggaggagagc ataaagaacg cgcaggaggc gtgcgccggc 240
gatccgacga gcg 253

<210> 341

<211> 283

<212> nucleic acid

<213> Glycine max

<220>

<221> unsure

<222> (64)

<223>

<400> 341

gtaactatga ctggtgtgag ctttcatgc ccagggttt ttttcaacgc atcagcctca 60
ctgnaaaacg cgcatgatgt aaagttctca cttccacaca gcatagaagg tggatcgggt 120

agtatcaagt tgggtcgcgt gatgagatc cgagccgttc gcgctgcgcc tgagcgcata 180
 tcggagaagg tggaggagag catacagaac gcgcaggagg cgtgcgccgg cgatcagttg 240
 agcggcgagt gcgtggcggc gtgggaacgat gtggaggagc tga 283

<210> 342
 <211> 251
 <212> nucleic acid
 <213> Glycine max

<400> 342

gagaatggca actatgactg gtgtgagcct ttcattcccc agggttttct tcaacgcatac 60
 agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccaccagcc aagcagttag 120
 accgggtagt atcaagttgg gtgcgctgat gaggatccga cccgttcgcg ctgcgcctga 180
 gcgcataatcg gagaaggtgg gagagcataa agaacgcgcg gaggtgcgc gccgatccga 240
 cgagcggcga t 251

<210> 343
 <211> 271
 <212> nucleic acid
 <213> Glycine max

<400> 343

aaacccctc cagagaacaa gaatcaaaga atggcaacta tgactggtgt gagcctttca 60
 agccccagg ttttcttcaa cgcattcccc tcaccgcaa acacgtacgc cgtaaagttc 120
 gcagttccac tcagccaagg gatgcgactt ggtagtgtca ggttgggtcg ggtgatgagg 180
 atccgaccg ttcgcgcagt ccagagcgca tttcggagaa ggtggaggag agcataaaga 240
 acgcgcagga ggctgcgcc gccgaccga c 271

<210> 344
 <211> 257
 <212> nucleic acid
 <213> Glycine max

<400> 344

gcctttcaag cccaggggtt ttcttcaacg catcaccctc accgcaaac acgtacgccg 60
 taaagttcgc agttccactc agccaaggga tacgacttgg tagtgtcagg ttgggtcggg 120

tgatgaggat ccgacccgtt cgcgcactcc agagcgcatt tcgagaagg tggaggagag 180
cataaagaac gcgcaggagg cgtgcgccgg cgacccgacg agcggcgagt gcgtggcggc 240
gtgggacgag gtggagg 257

<210> 345
<211> 281
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (71),(104)
<223> unsure at all n locations

<400> 345

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcac 60
agtctcaccg naaaacgcgc atgctgtaaa gttctcactt tcanacagcc aagaagacac 120
aaagggtagt atcaagttgg gtcgcgtgat gaggatccga cccgttcgag ctgcgtctga 180
gcgcatatcg gagaaggtgg aggagagctg aaggaacgcg caggaggcgt gcgccggcga 240
tccgacgagc ggcgagtgcg tagcggcgtg ggacgaggtg g 281

<210> 346
<211> 249
<212> nucleic acid
<213> Glycine max

<400> 346

gagaatggca actatgactg gtgtgagcct ttcatgcccc agggttttct tcaacgcac 60
agcctcaccg caaaacgcgc atgctgtaaa gttctcactt ccagccagcc tatgagtctt 120
accgggtagt agcaagttgg gtcgcgtgat gatgatccga cccgttcgag ctgcgcctga 180
gcgcatatcg gagaaggtgg aggagagcaa acagaacgcg ctaggaggcg tacgccggcg 240
atccgacga 249

<210> 347
<211> 240
<212> nucleic acid
<213> Glycine max

<400> 347

cgtccgatag gatgcgagaa gacgacagaa ggggagagaa caagaatcaa agaatggcaa 60
 ctatgactgg tgtgagcctt tcaagcccca gggttttctt caacgcatca ccctcgccgc 120
 aaaacacgta cgccgtaaag ttcgcagttc cactcagcca agggactcga cttggtagtg 180
 tcaggttggg tcgggtgatg aggatgagag ccgttcgagc agctccagag cgcagttcgg 240

<210> 348
 <211> 91
 <212> nucleic acid
 <213> Glycine max

<400> 348

gagaatggga actatgactg gtgtgagcgt ttcattgcgc agggttttct gcaacgcatc 60
 agcgtcaggg caaaacgcgc atagtgtaaa g 91

<210> 349
 <211> 119
 <212> nucleic acid
 <213> Glycine max

<400> 349

ctcgagccga gagaatggca actatgactg gtgtgagcct ttcattgccc agggttttct 60
 tcaacgcatc agcctcacgg caaaacgcgc atgctgtaaa gttctcactt ccaccagc 119

<210> 350
 <211> 175
 <212> nucleic acid
 <213> Glycine max

<400> 350

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgcccc gggttttctt 60
 caacgcatca gcttcaccgc aaaacgcgca tgctgtaaag ttctcacttc caccagcca 120
 agcagtgcga ccgggtagta tcaagttggg tcgctgatg aggatccgac ccgtt 175

<210> 351
 <211> 285
 <212> nucleic acid
 <213> Glycine max

<400> 351

gaagaatcag agaatggcaa ctatgactgg tgtgagcctt tcatgcccc gggttttctt 60
 caacgcatca ggctcaccgc aaaacgcgca tgctgtaaag ttctctttta ttgtattttg 120
 tccagcagat tctatgactt gacaggactg cagaatggaa ttctgaagcg agggagagag 180
 attttcctca ctgggttgcta cctccgaact cccactggag gttctggaca ttcacgtctt 240
 ttgccaacag agtatcttgt gattctattg gatgaagact tccaa 285

<210> 352
 <211> 111
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (31), (58), (62), (67)... (68), (70), (97)
 <223> unsure at all n locations
 <400> 352

gaatggcaac tatgactggt gtgagccttt natgccccag gggtttcttc aacgcatnag 60
 cntcacnngn aaaacgcgca tgctgtaaag ttctcanttc cacacaacat a 111

<210> 353
 <211> 156
 <212> nucleic acid
 <213> Glycine max
 <400> 353

cttagacctc atcatcataa accccctcca gagaacaaga aacatccgaa tggcaactat 60
 gactggtgtg agcctttcaa gccccagggt tttcttcaac gcatcaccct caccgcaaaa 120
 cacgtaagcc gtaaagtctg cagttccact cagcca 156

<210> 354
 <211> 136
 <212> nucleic acid
 <213> Glycine max
 <400> 354

tcatcataaa cccctccag agaacaagaa tcacagaatg gcaactatga ctggtgtgag 60
 cctttcaagc cccagggttt tcttcaacgc atcaccctca ccgcaaaaaca cgtacgccgt 120

aaagttcgca gttcca

136

<210> 355
 <211> 85
 <212> nucleic acid
 <213> Glycine max

 <220>
 <221> unsure
 <222> (36), (58)
 <223> unsure at all n locations

<400> 355

ctatgactgg tgtgagcctt tcaagcccca gggttntctt caacgcatca ccttcaengc 60

aaaacacgta cgccgtaaag ttcgc 85

<210> 356
 <211> 356
 <212> nucleic acid
 <213> Glycine max

<400> 356

ctctctgaaa tgggtttcgc tttggcatac acagcatctg gttgttgctc aaacctacaa 60

tttcagtctc tgttattcgc tgctgcttca ttgagatcaa aaccgtgtct ctctctctgc 120

aactctactt atcgacccaa acgcattctc cagcgttctc caattggttg cgctcagtct 180

gaaaatggag ctctggttac ttcggagaag cccgacacta attacggaag acaatacttc 240

cccctcgctg ctgttgtagg ccaagattct ataaaaactg ctcttttact tgggtgcaatt 300

gaccccgggg ttggaggaat tgccatatca ggaaagcgag gaactgccaa aactgt 356

<210> 357
 <211> 339
 <212> nucleic acid
 <213> Glycine max

 <220>
 <221> unsure
 <222> (2), (44), (154), (221), (335)
 <223> unsure at all n locations

<400> 357

anatgggttt cgctttggca ttcacagctt cttctacttg ctgntcaaatt ctacaatctc 60

agtcctctgtt attcgctgct gctgcattga gatcaaaacc gtgtctctct ctctgcaaca 120
 cttatcgacc caaacgcatt cggaagcggt cttnaattgt tggcgctcaa tctgaaaacg 180
 gagctctcgt tacttccgag aagcctgaca ctaattacgg nagacaatac ttccccctcg 240
 ctgctgttgt aggccaagat gctataaaaa ctgctctttt acttggggcc attgaccctg 300
 ggattggagg aattgccata tcatgaaagc gaggnactg 339

<210> 358
 <211> 284
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (40),(101)...(102),(213),(244),(278),(283)
 <223> unsure at all n locations

<400> 358
 tccggttatg gcgtccgcct tgggcacttc ttcaattgcn gttctgcctt cgcgctactt 60
 ctcttcttct tcttcccagc cttccattca cactctctct nnaacttcag ggcagaacta 120
 tgggcggaag ttttatggag gaattggaat ccatggcata aagggaagg ctcagctctc 180
 ggttaccaat gttgccactg aagttaactc tgnagaacag gctcagagta ttgcttctaa 240
 aganagccag aggccagtat acccattttc tgccatantt ggnc 284

<210> 359
 <211> 263
 <212> nucleic acid
 <213> Glycine max
 <400> 359

tggcgccgc cttgggcact tcttcaattg cggttctgcc ttcgcgctac ttctcttctt 60
 cttcttccaa gccttccatt cacactctct ctctaacttc agggcagaac tatgggcgga 120
 agttttatgg aggaattgga atccatggca taaagggaag ggctcagctc tcggttacca 180
 atgttgccac tgaagttaac tctgtagaac aggctcagag tattgcttct aaagaaagcc 240
 agaggccagt ataccattt tct 263

<210> 360
 <211> 280

<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (30), (72)
<223> unsure at all n locations

<400> 360

gtctgtcttc tcttctcttc tccggttatn gcgtccgcct tgggcacttc ttcaattgcg 60
gttctgcctt cnggggtactc tcttcttctt cttccaagcc ttccattcac actctctctc 120
taacttcagg gcagaactat gggcggaagt tttatggagg aattggaatc catggcataa 180
aggggaagggc tcagctctcg gttaccaatg ttgccactga agttaactct gtagaacagg 240
ctcagagtat tgcttctaaa gaaagccaga ggccagtata 280

<210> 361
<211> 278
<212> nucleic acid
<213> Glycine max

<220>
<221> unsure
<222> (18), (23), (45), (47), (56), (58), (71), (73), (97), (102),
(116), (163), (169), (201), (204), (207), (219), (221), (234)
<223> unsure at all n locations

<400> 361

tctgctccgg ttatggcntc cgncttgggc acttcttcaa ttgcngtct gccttnncg 60
ctacttctct ncttcttctt ccaagccttc cattcanact cncctctctaa cttcanggca 120
gaactatggg cggaagtttt atggaggaat tggaatccat ggnataaang gaagggctca 180
gctctcggtt accaatgttg ncantgnagt taactctgna naacaggctc agantattgc 240
ttctaaagaa agccagaggc cagtataccc attttctg 278

<210> 362
<211> 283
<212> nucleic acid
<213> Glycine max

<400> 362

attgctacat agcacacact ccttcttctc ttctacggtt atggcgtcca cggtgggcac 60

ttcttcaatt gcggttcttc ctctgcgctg catctcttct ttttcttcca agccttccat 120
 tcacacactc tctctaactt cagggcagag ctatgggagg aaattttatg gaggaattgg 180
 aattcatggc atcaaggga ggtctcagct ctcatgtgcc aatggtgcca ctgaagttaa 240
 ctctgtagaa caggcccaaa gtattgcttc taaagaaagc cag 283

<210> 363
 <211> 273
 <212> nucleic acid
 <213> Glycine max
 <220>
 <221> unsure
 <222> (2), (178)
 <223> unsure at all n locations
 <400> 363

gnaacaaatt gctacatagc acacactccc ttttctcttc tacggttatg gcgtccacgt 60
 tgggcacttc ttcaattgag gttcttcctt cgcgctgcat ctcttctttt tcttccaagc 120
 cttccattca cacactctct ctaacttcag ggcagagcta tgggcggaaa ttttatgnag 180
 gaattggaat tcatggcatc aagggaaggt ctcatctctc agttgccaat gttgccactg 240
 aagttaactc tgtagaacag gcccaaagta ttg 273

<210> 364
 <211> 259
 <212> nucleic acid
 <213> Glycine max
 <400> 364

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60
 caattcttca attgcggttc ttccttcgag ctgcatctct ttttttctt ccaagccttc 120
 cattcacaca ctctctctaa cttcagggca gagctatggg cggaaatttt atggaggaat 180
 tggaattcat ggcataagg gaaggtctca gctctcagtt gccaatgttg cactgaagt 240
 taactctgta gaacaggcc 259

<210> 365
 <211> 253
 <212> nucleic acid
 <213> Glycine max

<400> 365
 acggctgcga aagacgacag aaggggacgg ttatggcgtc cacgttgggc acttcttcaa 60
 ttgcggttct tcttcgcgc tgcattctctt ctttttcttc caagccttcc attcacacac 120
 tctctctaac ttcagggcag agctatgggc ggaaatttta tggaggaatt ggaattcatg 180
 gcatcaaggg aaggtctcag ctctcagttg ccaatgttgc cactgaagtt aactctgtag 240
 aacaggccca aag 253

<210> 366
 <211> 243
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (24)
 <223>

<400> 366
 aataaaagac aaaagaaaca aaangctaca tagcatcacag tctgtcttct cttctcttct 60
 ccggttatgg cgtccgcctt gggcacttct tcaattgcgg ttctgccttc gcgctacttc 120
 tcttcttctt cttccaagcc ttccattcac actctctctc taacttcagg gcagaactat 180
 gggcggaagt tttatggagg aattggaatc catggcataa agggaagggc tcagctctcg 240
 gtt 243

<210> 367
 <211> 259
 <212> nucleic acid
 <213> Glycine max

<220>
 <221> unsure
 <222> (191)
 <223>

<400> 367
 gcacacactc cctcttctct tctacggtta tggcgctccac gttgggcact tcttcaattg 60
 cggttcttcc ttgcgctgc atctcttctt tttcttccaa gccttccatt cacacactct 120
 ctctaacttc agggcagagc tatgggcgga aattttatgg aggaattgga attcatgggc 180

atcaagggaa ngctcagct ctcagttgcc aatggtgcca ctgaagttaa ctctgtagaa 240
caggcccaaa gtattgctt 259

<210> 368
<211> 163
<212> nucleic acid
<213> Glycine max

<400> 368

caaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60
cacttcttca attgcggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120
cattcacaca ctctctctaa cttcagggca gagctatggg cgg 163

<210> 369
<211> 151
<212> nucleic acid
<213> Glycine max

<400> 369

gaaattgcta catagcacac actccctctt ctcttctacg gttatggcgt ccacgttggg 60
cacttcttca attgcggttc ttccttcgcg ctgcatctct tctttttctt ccaagccttc 120
cattcacaca ctctctctaa cttcagggca g 151

<210> 370
<211> 232
<212> nucleic acid
<213> Glycine max

<400> 370

gaagaatgaa atctatctat cttcttatcc gaagcccgtg aggccaataa gaagcacgtc 60
agctgctatg aatggtgaat aaaacacaaa agaaacaaat tgctacatag cacacactcc 120
ctcttctctt ctacgggttat ggcgtccacg ttgggcactt cttcaattgc ggttcttctt 180
tcgcgctgca tctcttcttt ttcttccaag cttccattc acacactctc tc 232

<210> 371
<211> 107
<212> nucleic acid
<213> Glycine max

<400> 371

tacggctgga agacgacaga agggggaata aaacacaaaa gacacaaatt gctacatagc 60
acacactccc tcttctcttc tacggttatg gcgtccacgt tgggcac 107

<210> 372

<211> 235

<212> nucleic acid

<213> Glycine max

<400> 372

ctcgagccga atcggctcga ggcagattaa aagggatgga attaccaagc ttgttattct 60
tccactttat ccacaatttt caatatcaac cagtggctca agcctacgtc tactggagag 120
tatattccga gaggatgagt atctagtcaa catgcagcac acagtaatac catcatggta 180
tcaacgtgaa ggatacataa aggccatggc aaatttgatt gagaaagagt tgaga 235

<210> 373

<211> 250

<212> nucleic acid

<213> Glycine max

<400> 373

gaccaggcac ttgcaattaa aatggctttg gaagcaaagg gcatctcttc aatgtctac 60
gttgggatgc gatactggta cccatttacc gaagaagcaa ttcagcaaata taagagggac 120
agaataacaa ggcttgttgt actaccctt tatccccagt tttctatata cacaactgga 180
tcaagcatcc gtgttcttga gcatatattc aggaagatg cctacttgtc taagctccct 240
gtttccatta 250

<210> 374

<211> 254

<212> nucleic acid

<213> Glycine max

<400> 374

ggaatgtgtt gatttgatca tggaagagct tgaaaagaga aagataacta atgcatacac 60
ccttgcttat cagagtagag ttggacctgt ggaatgggta aaaccctata cagatgagac 120
aataattgaa cttgggaaaa agggagtaaa aagcctgctg gctgtaccaa ttagctttgt 180

cagcgagcat attgaaactc tcgaagaaat tgatgttgag tacaaagaat tggctctaaa 240
ctctggtata gaaa 254

<210> 375
<211> 248
<212> nucleic acid
<213> Glycine max

<400> 375

gaaaaagttg gtgtgctgct tctcaatcta ggaggaccag agacattgaa tgacgttcaa 60
ccttttctgt ttaatctttt tgcagatcct gatatcattc gtcttccaag gttgtttcgg 120
tttctccagc gaccattggc aaaattgatt tctgtacttc ggtctcctaa atccaaggaa 180
gggtatgctg ctattggtgg tggctctcct ttacgcaaaa ttacagatga ccaggcactc 240
gcaattaa 248

<210> 376
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 376

aattgacatg gagtacaagg aattggctct tgaatctggc atcaagaatt gggcacgtgt 60
acctgccctt ggtgttacct ctctcttcat tacagattta gcagatgcag taatagaagc 120
tctcccatca gcaacagcaa tatatgcacc gaccagaacc tctgaagatg ttgatcatga 180
cccagttaga tattttatca agatgttctt tggttcaatc ttggcattca tcttgttctt 240
gtcacccaaa atgatcacgg cattcaggaa tcatg 275

<210> 377
<211> 288
<212> nucleic acid
<213> Glycine max

<400> 377

ccttcttca tacagattta gcagatgcag taatagaagc tctcccatca gcaacagcaa 60
tatatgcacc gaccagaacc tctgaagatg ttgatcatga cccagttaga tattttatca 120
agatgttctt tggttcaatc ttggcattca tcttgttctt gtcacccaaa atgatcacgg 180

cattcaggaa tcatgtcatt tagaagaatt aaatcctgct tgctgaattc aatctgcaag 240
catatagatg aagcctattg atagcaacaa agtatacttt gattttttt 288

<210> 378
<211> 282
<212> nucleic acid
<213> Glycine max

<400> 378

atggaaaaaa gggagtgtgaa agtctgctcg ctgttccaat tagcttcgtc agtgagcata 60
ttgaaactct agaagaaatt gatgttgaat acaaagagtt ggctctagaa tctgggtatag 120
aaaagtgggg ccgtgttcct gctctaggat gcgaacctac cttcatttct gatttggcag 180
atgccgttat tgagagtctc ccataatgttg gtgccatgac agcttcagac cttgaagctc 240
aacaatcctc gttccatggg cagtgtagaa gagttattgg ca 282

<210> 379
<211> 237
<212> nucleic acid
<213> Glycine max

<400> 379

catccgtggt cttgagcata tattcagggg agatgcctac ttgtctaagc tccctgtttc 60
cattataaac tcttggtatc aacgagaagg ttatatataag tcaatggcta acttaattca 120
gaaagagctc cagagttttt ctgaacccaa agaggtaatg atatttttca gtgcccattg 180
tgtacctgtc agttacgttg aggaagctgg ggatccatac cgagacccaa tggagga 237

<210> 380
<211> 253
<212> nucleic acid
<213> Glycine max

<400> 380

actggatcaa gcatccgtgt tcttgagcat atattcaggg aagatgccta cttgtctaac 60
ctccctgttt ccattataaa ctcttggtat caacgagaag gttatatataa gtcaatggct 120
aacttaattc agaaagagcg ccagagtttt tottaaccaa aagaggtaat gatatttttc 180
agtgcccatg gtgtacctgt caagtacgtt gagggagctg gggatccata ccgagaccaa 240

atggaggagt gca

253

<210> 381
<211> 269
<212> nucleic acid
<213> Glycine max

<400> 381

ttcttgagca tatattcagg gaagatgcct acttgtctaa gctccctgtt tccattataa 60
actcttggtg tcaacgagaa gggttatatta agtcaatggc taacttaatt cagaaagagc 120
tccagagttt ttctgaacca aaagaggtaa tgatattttt cagtgcccat ggtgtacctg 180
tcagttacgt tgaggaagct ggggatccat accgagacca aatggaggag tgcattttct 240
tgatcatgca agagttgaaa gctagagga 269

<210> 382
<211> 251
<212> nucleic acid
<213> Glycine max

<400> 382

aagagctcca gagtttttct gaaccaaag aggtaatgat atttttcagt gcccatggtg 60
tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaag gaggagtgc 120
tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac actcttgctt 180
atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa gttctcgttg 240
agcttgcca a 251

<210> 383
<211> 275
<212> nucleic acid
<213> Glycine max

<400> 383

ttaattcaga aagagctcca gagtttttct gaaccaaag aggtaatgat atttttcagt 60
gcccatggtg tacctgtcag ttacgttgag gaagctgggg atccataccg agaccaaag 120
gaggagtgc tcttcttgat catgcaagag ttgaaagcta gaggaattag taatgagcac 180
actcttgctt atcagagtcg agtgggtcct gtacagtggc tgaaaccata tactgatgaa 240

gttctcgttg agcttggcca aaaaggtgtg aagag 275

<210> 384
<211> 168
<212> nucleic acid
<213> Zea mays

<400> 384

ctttcttaca tatattcagc accacctctc aagctcgagc agaatggatg gattgggaac 60

ttcgctctgg gtgcgagtta catcagcttg ccctgggtgg ctggccaggc gttatttgga 120

actcttacac cagatatcag tgtcttgact actttgtaca gcatagct 168

<210> 385
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 385

attgaagggg ataggactct ggggcttcag tcacttcctg ttgcttttgg gatggaaact 60

gcaaaatgga tttgtgttgg agcaattgat atcactcaat tatctgttgc aggttaccta 120

ttgagcaccg gtaagctgta ttatgccctg gtgttgcttg ggctaacaat tcctcaggtg 180

ttctttcagt tccagtactt cctgaaggac cctgtgaagt atgatgtcaa atatcaggca 240

agcgacaac cattct 256

<210> 386
<211> 411
<212> nucleic acid
<213> Zea mays

<400> 386

cccacgcgtc cgcccacgcg tccgcccacg cgcccgccca cgcgctccgag cacacacggg 60

cgcatcaggg cctagctcga gtccactact tgaaaaacag gaaaaagggt gcgtttgagg 120

agatgacgaa gctcgtggag atagccagcc actgcgcgtc ggcatatgaa aagcggtcgg 180

aatacgggtga gcgcgaagct gcgaggagcg acctgaacat ggcgacgctt cttgatccta 240

ccaggactta tccttacaga tacagagcag ctgtactgat ggacgaaggc aaggaggagg 300

aggcgatcgc ggagctgtca ggagccatag ctttcaagcc ggaccttcag ctgctgcacc 360

ttcgcgcggc gttcttcgac tccatgggcg agcgcgagag cgccctgtgg g 411

<210> 387
 <211> 484
 <212> nucleic acid
 <213> Zea mays
 <220>
 <221> unsure
 <222> (1),(9)...(10),(57),(61)...(62),(446)
 <223> unsure at all n locations
 <400> 387

ntgggggttnn ctagagggga ggggggcaat tgatggaagt cttcaattcc gtttcgnacc 60
 nccccgcccc acgcgtccgc cgacgccaaa aacgcgaagg cgaacgccat ggccccgaat 120
 aagagcaccg gcggcgcatg actccagttt caaccagctg ctcggtatca aaagtgccta 180
 gccagggaaac ggccttttgg aaaatccgcc ttaacttaac taagccggtg acatggcctc 240
 cgcttgtttg gggagttctc tgtggagcag ctgcctctgg aaatttccac tggacagttg 300
 aagatgtcgc aaaatctatt gtatgcatga taatgtctgg tccatgcctt acaggatata 360
 cacagacact taatgactgg tatgatcgag acattgatgc aattaatgag cttatcggc 420
 ctattccatc aggtgctata tcaganaacg aggtaataac ccagatctgg gtgctattgc 480
 tagg 484

<210> 388
 <211> 301
 <212> nucleic acid
 <213> Zea mays

<400> 388
 ccaaggcccc gaataacgca cccgcggcgg atggctccag tttcaaccag ctgctcggta 60
 tcaagggtgc taagcaagac agcgacatgt ggcagatgcg tcttcaactt actaagccgg 120
 tgacatggcc tccgcttggt tggggagttc tctgtggagc agctgcctct ggaaatttcc 180
 agtggacagt tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc 240
 ttacaggata cgcacagaca cttaatgact ggtatgatcg agacattgat gcaattagtg 300
 a 301

<210> 389
 <211> 284
 <212> nucleic acid
 <213> Zea mays

<400> 389

tgaagatgtc gcaaaatcta ttgtatgcat gataatgtct ggtccatgcc ttacaggata 60
 cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 120
 gcctattcca tcagggtgcta tatcagaaaa cgaggtaata acccagatct ggggtgctatt 180
 gctaggaggg cttggattgg gtgctttgtt agatgtgtgg gcaggacatg attttcctat 240
 tgtgttttat cttgctgtgg gtggctcctt actttcttac atat 284

<210> 390
 <211> 256
 <212> nucleic acid
 <213> Zea mays

<400> 390

caattaatga gccttatcgg cctattccat cagggtctat atcagaaaac gaggtaataa 60
 cccagatctg ggtgctattg ctaggagggc ttggattggg tgctttgtta gatgtgtggg 120
 caggacatga ttttcctatt gtgttttata ttgctgtggg tggctcccta ctttcctaca 180
 tatattcagc accacctctc aagctccagc agaatggatg gaatgggaac ttcgctctgg 240
 gtgcgagtta catcag 256

<210> 391
 <211> 318
 <212> nucleic acid
 <213> Zea mays

<400> 391

gcatgataat gtctgggtcca tgccttacag gatacacaca gacacttaat gactggtatg 60
 atcgagacat tgatgcaatt aatgagcctt atcggcctat tccatcaggt gctatatcag 120
 aaaacgaggt aataaccag atctgggtgc tattgctagg agggcttgga ttgggtgctt 180
 tgtagatgt gtgggcagga catgattttc ctattgtgtt ttatcttgct gtgggtggct 240
 ccttactttc ttacatatat tcagcaccac ctctcaagct caagcagaat ggatggattg 300

ggaacttcgc tctgggtg 318

<210> 392
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 392

ctggtgtaag agttccaaat aacgcctggc cagcccacca gggcaagatg atgtaactct 60
aaccagagc gaagttccca atccatccat tctgcttgag cttgagaggt ggtgctgaat 120
atatgtaaga aagtaaggag ccacccacag caagataaaa cacaatagga aaatcatgtc 180
ctgcccacac atctaacaaa gcacccaatc caagccctcc tagcaatagc acccagatct 240
gggttattac ctcgttttct gatatagcac ct 272

<210> 393
<211> 288
<212> nucleic acid
<213> Zea mays

<400> 393

cacacagaca cttaatgact ggtatgatcg agacattgat gcaattaatg agccttatcg 60
gcctattcca tcagggtgcta tatcagaaaa cgaggtaata acccagatct ggtgctatt 120
gctaggaggg cttggattgg gtgctttgtt agatgtgtgg gcaggacatg attttcctat 180
tgtgttttat cttgctgtgg gtggctcctt actttcttac atatattcag caccacctct 240
caagctcaag cagaatggat ggattgggaa cttcgtctcg ggtgcgag 288

<210> 394
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 394

caattcctca ggtgttcttt cagttccagt acttcctgaa ggaccctgtg aagtatgatg 60
tcaaatatca ggcaagcgca caaccattct tcgtaactggg cctactggtg acagcactgg 120
caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccgaaga 180
ggcacgtctg gtgaccatta ataagctagc tgcttggtg cagggtagga agagaacgtc 240

tttttacttg tagaac 256

<210> 395
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 395

caattcctca ggtgttcttt cagttccagt acttcctgaa ggacctgtg aagtatgatg 60
tcaaatatca ggcaagcgca caaccattct tcgtactggg cctactgggtg acagcactgg 120
caaccagcca ttaatgaagg caaacttaaa cagaacgagc aaccgttctg ataccgaaga 180
ggcacgtctg gtgaccatta ataagctagc tgcttgtgtg cagggtagga agagaacgtc 240
tttttacttg tagaacacag atcgattttg taagggttat 280

<210> 396
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 396

cccacgcgtc cgtattcagc accacctctc aagctcaagc agaatggatg gattgggaac 60
ttcgctctgg gtgcgagtta catcagcttg ccctgggtggg ctggccaggc gttatttgga 120
actcttacac cagatatcat tgtcttgact actttgtaca gcatagctgg gctagggatt 180
gctattgtaa atgatttcaa gagtattgaa ggggatagga ctctggggct tcagtcactt 240
cctgttgctt ttgggatgga aactgcaaaa tggatttgtg ttggagc 287

<210> 397
<211> 152
<212> nucleic acid
<213> Zea mays

<400> 397

cagcaccacc tctcaagctc aagcagaatg gatggattgg gaacttcgct ctgagtgcga 60
gttacatcag cttgccctgg tgggctggcc aggcgttatt tggaactctt acaccagata 120
tcattgtcta gactacttcg tacagcatag ct 152

<210> 398

<211> 298
 <212> nucleic acid
 <213> Zea mays

<400> 398

agggcttcgt gtcggaggcg gagtccggca agaggctggc gcaggtggtc agcgacccca 60
 gcctcaccaa gtcgggggtg tactggagct ggaacaagga ctcggcgtcg ttcgagaacc 120
 agctgtcgca ggaggccagc gatccggaga aggccaagaa gctctgggag atcagcgaga 180
 agctcgtggg gcttccttga gctccccgca caggaaaaag cgacatgatg aatctgtcga 240
 gcagaggagc tttcgttcg ttgtattatg tgtaacatta gcatccattt gtttgttt 298

<210> 399
 <211> 218
 <212> nucleic acid
 <213> Zea mays

<400> 399

ggggagttcg acggcgccaa ggcatacaag gacagcaagg tgtgcaacat gctgacgatg 60
 caggagttcc accgccggtg ccacgaggag acgggcgtga ccttcgcgtc gctctacccg 120
 ggctgcatcg ccaccagggg cctgttcgcg gaacaaattc cgctgttcg gctgtgctcc 180
 gcccgccgtt ccagaagtac atcaccaggg tacgtctc 218

<210> 400
 <211> 317
 <212> nucleic acid
 <213> Zea mays

<400> 400

gtcacttctc cacgaacaaa agcgcatcga tctcgtgtc gtcactcctc gtcaccagc 60
 cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctactccca tacaccctct 120
 catccgtccc caagaagtgc agcctcgccg tcgcggcgaa tgacacggca ttccttagcg 180
 tatectacaa gaaggtgcac gcggcgtcac tgtccgtgaa aacgcggtgg cgactaccgc 240
 gcctgtggcc acgccggggt ccagcacggc ggtcaacgat ggaagaaga ccgtgcggca 300
 tgccgtggtg gtgatca 317

<210> 401

<211> 172
<212> nucleic acid
<213> Zea mays

<400> 401

gcagaagtcc gactaccggt cccggcgggt tatcatcctc ggggccatca ccggcaacag 60
caacacgctg gccgggaaca tcccgcccaa ggccgggctg ggcgaccttc gcgggctcgc 120
ggcggggctg cgcggccaga acggctctgc catgatcgac ggcttcgaga gc 172

<210> 402
<211> 313
<212> nucleic acid
<213> Zea mays

<400> 402

aaatcctcag tcctcagggt gctcacagtt cgtgctatcc gctcgcgctc ccggtagtct 60
gcctgctcgg caattcgga tggcgctcca ggccgcgacg tccttcctcc cctcggccct 120
ctcggcgcgc aaggaggggt cgtcggtgaa ggactcggcg ttcttggggtg tccatctcgc 180
ggacgatggc ctcaagctgg agaccgctgc tctgggccta cgcaccaaga gggatgatcac 240
gtcggtgggc atccgcgcgc aggcggcagc ggtgtcctca ccatcagtat accccgcgtc 300
gccgtccggc aag 313

<210> 403
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 403

cccagccaaa tcctcagtc tcaggctgct cacagttcgt gctatccgct cgcgctcccg 60
gtagtctgcc tgctcggcaa ttcggcatgg cgtccaggc cgcgacgtcc ttctcccct 120
caggccctct gcggcgcgca aggtaggggt cgtcggtgaa ggactcggcg ttcttggggtg 180
tccatctcgc ggacgatggc ctcaagctgg agaccgctgc tatgggccta cgcaccaaga 240
gggtgatcac gt 252

<210> 404
<211> 399
<212> nucleic acid

<213> Zea mays

<400> 404

accacgcgtc cgcatacaag gacagcaagg tgtgcaacat gctgacgatg caggagttcc 60
accgccggta ccacgaggag acgggcgtga ccttcgcgtc gctctaccgc ggctgcatcg 120
ccaccacggg cctgttccgc gagcacatcc cgtgttccg cctgctcttc ccgccgttcc 180
agaagtacat caccaagggg tacgtctccg aggaggaggc cgggaagcgg ctggcgacgg 240
tggtgagcga cccagcctg accaagtccg gcgtgtactg gagctggaac aagaactccg 300
cgtccttcga gaaccagctc tctgaggagg ccagcgacgc cgacaaggcc aagaagctct 360
gggagatcag cgagaagctc gtcggcttgg cgtgatgcc 399

<210> 405

<211> 442

<212> nucleic acid

<213> Zea mays

<220>

<221> unsure

<222> (78), (399)

<223> unsure at all n locations

<400> 405

acaccggcac accaaccacgc tggccgggaa catcccgcgc aaggccgggc tgggcgacct 60
ccgcggcgtg gcggcgngc tgcgcggcca gaacggctct gccatgatcg acggctccga 120
gagcttcgac ggcgccaagg cgtacaagga cagcaagatc tgcaacatgc taacaatgca 180
ggagctgcac cggcggtaacc acgaggagac gggcatcacg ttcgcgtcgc tctaccggg 240
gtgcatcgcc accacggggc tgttccgcga gcacatcccg ctgttccggc tgctcttccc 300
gccgttccag aagttcgtca ccaaaggctt cgtgtcggaa gcggagtccg gcaagaagct 360
ggcgcatgtg gtcagcgacc ccagcctcac caagtccgng gtgtactgga gctggaacaa 420
ggactccgcg tcgttcgaga ac 442

<210> 406

<211> 442

<212> nucleic acid

<213> Zea mays

<400> 406

gcgatcacgg gcgacgcaa cacgctggcc ggtgacatct cgcccaaggc cgggctgggc 60
gacctccgcg gcctcgcggc ggggctgcgc ggccagaacg gctctgccat gatcgacggc 120
tccgagagct tcgacggcgc caaggcgtag aaggacagca agatctgcaa catgctcacc 180
atgcaggagc tgcaccggcg gtaccacgag gagacgggca tcacgttcgc gtcgctctac 240
ccgggggtgca tcgccaccac ggggctgttc cgcgagcaca tcccgtgtt ccgcctgctc 300
ttcccgctt tccagaagtt cgtcaccaag ggcttcgtgt cggaggcgga gtccggcaag 360
aggctggcgc atgtggtcag cgaccccagc cttaccaaag tcgggggtgta ctggagctgg 420
aacaggggac tcgctcgtt cg 442

<210> 407
<211> 352
<212> nucleic acid
<213> Zea mays
<400> 407

ctcctggcgc gcctgctcct ggacgacatg cagaagtccg actaccgctc ccggcgagtc 60
atcatcctcg gctccatcac cggcaacacc aacacgctgg ccgggaacat cccgccaag 120
gccgggctgg gcgacctgcg cggcctcgcg gcggggctgc gcggccagaa cggctctgcc 180
atgatcgacg gctccgagag cttcgacggc gccaaaggcgt acaaggacag caagatctgc 240
aacatgctca ccatgcagga gctgcaccgg cgggtaccag aggagacggg catcacgttc 300
gcgtcgtctt acccggggtg catcgccacc acggcgctgt tccgcgagca ca 352

<210> 408
<211> 277
<212> nucleic acid
<213> Zea mays
<400> 408

ctggccggga acatcccgcc caaggccggg ctgggcgacc tccgcgccct cgcgccgggg 60
ctgcgcggcc agaacggctc tgccatgacg gacggctccg agagcttcga cggcgccaag 120
gcgtacaagg acagcaagat ctgcaacatg ctaacaatgc aggagctgca ccggcggtac 180
cacgaggaga cgggcatcac gttcgcgtcg ctctaccgg ggtgcatcgc caccacgggg 240
ctgttccgcg agcacatccc gctgttcggg ctgctct 277

<210> 409
 <211> 272
 <212> nucleic acid
 <213> Zea mays

<400> 409

gacggcgcca aggcatacaa ggacagcaag gtgtgcaaca tgctgacgat gcaggagttc 60
 caccgcccgtt accacgagga gacgggctgt accttcgctg cgctctaccc gggctgcatc 120
 gccaccacgg gcctgttccg cgagcacatc ccgctgttcc gcctgtcttt cccgccgttc 180
 cagaagtaca tcaccaagggt gtacgtctcc gaggaggagg ccgggaagcg gctggcgag 240
 gtggtgagcg accccagcct gaccaagtcc gg 272

<210> 410
 <211> 309
 <212> nucleic acid
 <213> Zea mays

<400> 410

cactggccgg gaacatcccg cccaaggccg ggctgggcga cctccgcagc ctgcgcccgg 60
 ggctgcgcgg ccagaacggc tctgccatga tcgacggctc cgagagcttc gacggcgcca 120
 aggcgtacaa ggacagcaag atctgcaaca tgctcaccat gcaggagctg caccggccgtt 180
 accacgagga gacgggcatac acgttcgctg cgctctaccc ggggtgcatc gccaccaagg 240
 ggctgttccg cgagcacatc ccgctgttcc gcctgtcttt cccgccgttc cagaagtctg 300
 tcaccaagg 309

<210> 411
 <211> 264
 <212> nucleic acid
 <213> Zea mays

<400> 411

cagaacggct ctgccatgat cgacggctcc gagagcttcg acggcgccaa ggcgtacaag 60
 gacagcaaga tctgcaacat gctcaccatg caggagctgc accggcgcta ccacgaggag 120
 acgggcatca cgcttcgctc gctctacccg ggggtgcatc ccaccacggg gctgttccgc 180
 gagcacatcc cgctgttccg cctgtctctc ccgcctttcc agaagtctgt caccaagggc 240

ttcgtgtcgg aggcggagtc cggc 264

<210> 412
<211> 267
<212> nucleic acid
<213> Zea mays

<400> 412

gctcgggtgat gatcgacggc ggggagttcg acggcgccaa ggcatacaag gacagcaagg 60
tgtgcaacat gctgacgatg caggagttcc accgccggta ccacgaggag acggccgtga 120
ccttcgggtc gctctaccgc ggctgaatgg caacaacggg cctgttccgg gaacacatcc 180
cgctgttccg gctgctcttc ccgccgttcc agaagtacat caccaagggg gtacgtctcc 240
gaggaggagg ccgggaagcg ctggcgc 267

<210> 413
<211> 302
<212> nucleic acid
<213> Zea mays

<400> 413

ggcgtacaag gacagcaaga tctgcaacat gctcaccatg caggagctgc accggcggta 60
ccacgaggag acgggcatca cgttcgcgtc gctctaccgc ggggtgcatcg ccaccacggg 120
gctgttccgc gagcacatcc cgctgttccg cctgctcttc ccgccgttcc agaagtccgt 180
caccaagggc ttcgttccga agcgggaaccg gcaagaagct tgcgcaggtg gtcagcgacc 240
ccagcctcac caagtcgggg gtgtactgga gctggaacaa ggactcggcg tcgttcgaga 300
ac 302

<210> 414
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 414

ggcgcgcctg ctccctggacg acatgcagaa gtccgactac ccgtcccgcc gcctcatcat 60
cctcggctcc atcaccggca acaccaacac gctggccggg aacatcccgc ccaaggccgg 120
gctgggcgac ctccgcagcc tcgggcgggg ctgcgcggcc agaacggctc tgccatgatc 180

gacggctccg agagcttcga cggcgccaag gcgtacaagg acagcaagat ctgcaacatg 240
ctaacaatgc aggagctgca ccggcggtac cagcaggaga cgggcatcac g 291

<210> 415
<211> 268
<212> nucleic acid
<213> Zea mays

<400> 415

cgagcacatc ccgctgttcc gcctgctctt cccgccgttc cagaagtaca tcaccaaggg 60
gtacgtctcc gaggaggagg ccgggaagcg gctggcgagc gtggtgagcg accccagcct 120
gaccaagtcc ggcgtgtact ggagctggaa caagaactcc gcgtccttcg agaaccagct 180
ctctgaggag gccagctgac gcgacaaggc caagaagctc tgggagatcc gcgagaagct 240
cgtcggcttg gcgtgatgcc caccgtgc 268

<210> 416
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 416

cccacgcgtc cgaacacgct ggccgggaac atcccgccca aggccgggct gggcgacctc 60
cgcggcctcg ggcggggctg cgcgccaga acggctctgc caggatcgac ggctccgaga 120
gcttcgacgg cgccaaggcg tacaaggaca gcaagatctg caacatgctc accatgcagg 180
agctgcaccg gcggtaccac gaggagacgg gcatcacgtt cgcgtcgctc taccgggggt 240
gcatcgccac caccgggctg ttccgcgagc acatcccgct gttccgctg ctcttc 296

<210> 417
<211> 255
<212> nucleic acid
<213> Zea mays

<400> 417

gcctgctctt cccgccattc cagaagtaca tcaccaaggg gtacgtctcc gaggaggagg 60
ccgggaagcg gctgtcgagc gtcgtgagcg accccagcct gaccaagtcc ggcgtgtact 120
ggagctggaa caagaactcg gcgtccttcg agaaccagct ctctgaggag gccagcgacg 180

ccgacaaggc caagaagctc tgggagatca gcgagaagct cgtcagcttg gcgtgacgac 240
ctgatgtcca cagtg 255

<210> 418
<211> 326
<212> nucleic acid
<213> Zea mays

<400> 418

cggacgcgtg ggcggacgcg tggggaagta catcaccaag gggtagctct ccgaggagga 60
ggccgggaag cggctggcgc aggtggtgag cgaccccagc ctgaccaagt ccggcgtgta 120
ctggagctgg aacaagaact ccgcgtcctt cgagaaccag ctctctgagg aggccagcga 180
cgccgacaag gccagaagc tctgggagat cagcgagaag ctcgtcggct tggcgtgatg 240
cccaccgtgg ccggcgccgg cagccggcga cagtttttcc tacctaggac atgctcatta 300
gttggtctca gtcgagtagt cgacgt 326

<210> 419
<211> 290
<212> nucleic acid
<213> Zea mays

<400> 419

ctccgaggag gaggccggga agcggctgtc gcaggctcgtg agcgacccca gcaccgacca 60
agtccggcgt gtactggagc tggaacaaga actcggcgtc cttcgagAAC cagctctctg 120
aggaggccag cgacgcgcgac aaggccaaga agctctggga gatcagcgag aagctcgtcg 180
gcttggcgtg acgacctgat gccaccgtg gccggcgccg gcagccggtg acagtttttt 240
cctaggacat gttcgttact tgatctcagt cgacgcgtgg tgcactcgtg 290

<210> 420
<211> 217
<212> nucleic acid
<213> Zea mays

<400> 420

cccacgcgtc cgctgggcca ctctctctg gcgcgcctgc tcctggacga catgcagaag 60
tcgactacc cgtcccgccg cctcgtcatc ctcggctcca tcaccggcaa caccaacacg 120

[illegible]

<400> 421

<400> 422

<400> 423

151

<400> 424

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gccctggcgg agacaggcaa gtggcacgtc atcatggcct gccgcgactt cctcaaggcg 120
tcgcgcgcgg ccaaggcggc cggcatggac aaggacagct tcaccgtcgt gcacctggac 180
ctcgccctcc tggacagcgt ccgccagttc gtcaagaacg tgcgccagct ggagatgccc 240
atcgacgtgg tggctctgaa cgccgtcgtg taccagccca ccgccaagga gccgtcctac 300
accgccgacg gcttcgagat gagcgtcggc gtcaaccaac ctggccactt tctcctcgcg 360
cgcg 364

<210> 425

<211> 289

<212> nucleic acid

<213> Zea mays

<400> 425

cctggacctc gcctccctgg acagcgtccg ccagttcgtc aggaacgtgc gccactgaga 60
gatgcccata gacgtggtgg tctgcaacgc cgccgtgtac cagcccaccg ccaaggagcc 120
gtcctacacc gccgacggct tcgagatgag cgtcggcgtc aaccacctcg gccacttctt 180
cctcgcgcgc gagtcctca gcgacctcca gtctccgac taccctctta agcgcctcat 240
catcgtcggc tccatcaccg ggaacacgta cacgctggcg gggaacgtg 289

<210> 426

<211> 331

<212> nucleic acid

<213> Zea mays

<400> 426

atccgcacac gcgtccgcgt catcatgggc tgccgcgatt tccacaaggc gtcgcgcgca 60
gccaaagcag ccggcatgga caaggacagc ttcaccgtcg tgcacctgga cctcgcctcc 120
ctcgacagcg tccgccagtt cgtcaagaac gtgcgccagc tggagatgcc cgtcgacgtg 180
gtggtctgca acgccgccgt gtaccagccc accgccaaag agccgtccta caccgccgac 240
ggcttcgaga tgagcgtcgg cgtcaaacac ctcgccact tctcctcgc ccgcgagctc 300
ctcagcgacc tccagtcttc cgactatccc t 331

<210> 427
 <211> 280
 <212> nucleic acid
 <213> Zea mays

<400> 427

gtggtggtct gcaacgccgc cgtgtaccag cccaccgcca aggagccgtc ctacaccgcc 60
 gagggcttcg agatgagcgt cggcgtcaac cacctcggcc atttcctcct cgcccgcgag 120
 ctctcagcg acctccagtc ctccgactac ccctctaagc gcctcatcat cgtcggctcc 180
 atcaccggga acacgaacac gctggcgggg aacgtgcccc cgaactcgaa cctgggcgac 240
 ctgcgcggcc tcgccggcgg cctcaacggc gttggcagct 280

<210> 428
 <211> 285
 <212> nucleic acid
 <213> Zea mays

<400> 428

gagcgtcggc gtcaaccacc tcggccattt cctcctcgcc cgcgagctcc tcagcgacct 60
 ccagtcctcc gactaccct ctaagcgcct catcatcgtc ggctccatca ccgggaacac 120
 gaacacgctg gcggggaacg tgcccccgaa ggcgaacctg ggcgacctgc gcggcctcgc 180
 cggcggcctc aacggcgctg gcagctcggg gatgatcgac ggcggggagt tcgacggcgc 240
 caaggcatac aaggacagca aggtgtgcaa catgctgacg atgca 285

<210> 429
 <211> 282
 <212> nucleic acid
 <213> Zea mays

<400> 429

cccacgcgtc cgcaccggcg cgtcgtccgg cctcggcctc gccacggcga aggcctcgc 60
 ggagacaggc aagtggcacg tcatcatggc ctgccgcgac ttcctcaagg cgtcgcgcgc 120
 ggccaaggcg gccggcatgg acaaggacag cttcaccgtc gtgcacctgg acctcgcctc 180
 cctggacagc gtccgccagt tcgtcaggaa cgtgcgccag ctggagatgc ccatcgacgt 240
 ggtggtctgc aacgccgccg tgtaccagcc caccgccaag ga 282

<210> 430
 <211> 276
 <212> nucleic acid
 <213> Zea mays

<400> 430

cccacgcgtc cggtcaggaa cgtgcgccac tggagatgcc catcgacgtg gtggtctgca 60
 acgccgccgt gtaccagccc accgccaaagg agccgtccta caccgccgac ggcttcgaga 120
 tgagcgtcgg cgtcaaccac ctcgccatt tctcctcgc ccgcgagctc ctcagcgacc 180
 tccagtcctc cgactacccc tctaagcgcc tcatcatcgt cggtccatc accgggaaca 240
 cgaacacgct ggcggggaac gtgccccgac agcgaa 276

<210> 431
 <211> 229
 <212> nucleic acid
 <213> Zea mays

<400> 431

ccaaaacctg cagaggggtga gcaggtcggc ggacatccgc gcgcagacgg cagcgggtgc 60
 ctccccgtca gtgacccccg cgtcgccgtc tggcaagaag accctccgca agggcacggc 120
 ggtcatcacc ggcgcgctgt ccggcctcgg cctcgccacg gcgaaggccc tcgcggagac 180
 aggcaagtgg cacgtcatca tggcctgccg cgacttctca aggcgtcgc 229

<210> 432
 <211> 394
 <212> nucleic acid
 <213> Zea mays

<400> 432

aggaagaacc cagccaaatc ctcagtcctc aggtgctcg cagctcgtgc cgtccactct 60
 cccccgagge attctcttgc gttcgctgct cgacatggcg ctccaggcgg cgacgtcctt 120
 cctccccctc gccctctccg cgcgcaagga ggggtcgggtg aaggactcgg cgtcgttctt 180
 ggggtgttcgt ctcgcgggcg atggggtcaa gctggacacc accgctctgg gcctacgcac 240
 cgtgaggggtg agcaggtcgg cggacatccg cgcgcagacg gcagcgggtgt cctccccgtc 300
 agtgaccctt gcgtcgccgt ctggcaagaa gacctccgc attggcacgg cggtcacat 360

cggcgcgtcg tccggcctcg gcctcgccac ggcg

394

<210> 433
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 433

gttcgtctcg cggcggatgg cctcaagctg gacaccaccg ctctgggcct acgcaccgtg 60
aggggtgagca ggtcggcgga catccgcgcg cagacggcag cgggtgtctc cccgtcagtg 120
acccccgcgt cgccgtctgg caagaagacc ctccgcaagg gcacggcggg catcaccggc 180
gcgtcgctcg gcctcggcct cgccacggcg aaggccctcg cggagacagg caagtggcac 240
gtcatcatgg cctgccgcga cttcctcaag gcgtc 275

<210> 434
<211> 418
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (303), (315), (336), (347), (353), (356), (366), (378), (380),
(387), (389), (394)... (396), (398)... (399), (404), (411),
(415), (417)
<223> unsure at all n locations

<400> 434

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tccactctcc cccgaggcag tctcttgctg togtgctcg acatggcgct ccaggcgggc 120
acgtcctttc tcccctcggc cctctccgcg cgcaaggagg ggtcggtgaa ggactcggcg 180
tcgttcttgg gtgttcgtct cgcggcggat ggcctcaagc tggacaccac cgctctgggc 240
ctacgcaccg tgaggggtgag caggtcggcg gacatccgcg cgcagacggc agcgggtgtcc 300
tcnccgtcag tgacnccgcg gtccccgtct ggcaanaaga cctccgnaag ggnaanggcg 360
gtcatnaacg gggggctngn tagggcncng gggnnncnna gggngaaggg ngccncnt 418

<210> 435
<211> 321
<212> nucleic acid

<213> Zea mays
 <400> 435
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 gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttt ctccccctcg 120
 ccctctccgc gcgcaaggag gggtcggtga aggactcggc gtcgttcttg ggtgttcgctc 180
 tcgcggcgga tggcctcaag ctggacacca ccgctctggg cctacgcacc gtgaggggtga 240
 gcaggtcggc ggacatccgc gcgcagacgg cagcgggtgc ctccccgtca gtgacccccgc 300
 gatcgcgtct ggcaagaaga c 321

<210> 436
 <211> 112
 <212> nucleic acid
 <213> Zea mays
 <400> 436
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 atcgtcagct ccataccgg gaacacgaac acgctggcgg ggaacgtgcc cc 112

<210> 437
 <211> 296
 <212> nucleic acid
 <213> Zea mays
 <400> 437
 gactagttct agatcccccc gcggagcaga gaggaagaag aagaaccag ccaaatcctc 60
 agtcttcagg ctgctcacag ctcgtagcgt ccactctccc ccgaggcagt ctcttgcggt 120
 cgctgctcga catggcgctc caggcggcga cgtcctttct cccctcggcc ctctccgcgc 180
 gcaaggaggg gtcggtgaag gactcggcgt cgttcttggg tgttcgtctc gcggcggatg 240
 gcctcaagct ggacaccacc gctctgggcc tacgcaccgt gagggtgagc aggtcg 296

<210> 438
 <211> 175
 <212> nucleic acid
 <213> Zea mays
 <400> 438

cgacatggcg ctccaggcgg cgacgtcctt tctccctcg gccctctccg cgcgcaagga 60
 ggggtcgggtg aaggactcgg cgtcgttctt ggggtgttcgt ctgcggcgg atggcctcaa 120
 gctggacacc accgctctgg gcctacgcac cgtggagggtg agcaggtcag cggac 175

<210> 439
 <211> 301
 <212> nucleic acid
 <213> Zea mays
 <400> 439

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 ccccgagcca gtctcttgcg ttcgctgctc gacatggcgc tccaggcggc gacgtccttc 120
 ctccctctcg ccctctccgc gcgcaaggag gggtcgggtga aggactcggc gtcgttcttg 180
 ggtgttcgtc tcgcggcggga tggcctcaag ctggacacca ccgctctggg cctacgcacc 240
 gtgagggtga gcaggtcggc ggacatccgc gcgcagacgg cagcgggtgtc ctccccgtca 300
 g 301

<210> 440
 <211> 261
 <212> nucleic acid
 <213> Zea mays
 <400> 440

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 accaccgctc tgggcctacg caccgtgagg gtgagcaggt cggcggacat ccgcgcgcag 120
 acggcagcgg tgctctcccc gtcagtgaac ccgcgcgcgc cgtctggcaa gaagaccctc 180
 cgcataggca cggcgggtcat caccggcgcg tcgtccggcc tcggcctcgg cacggcgaag 240
 gccctcgcgg agacaggcaa g 261

<210> 441
 <211> 84
 <212> nucleic acid
 <213> Zea mays
 <400> 441

gtccggcctc ggctcgcga cggcgaaggc cctcgcggag acaggcaagt ggcacgtcat 60

catggcctgc cgcgacttcc tcaa

84

<210> 442
<211> 352
<212> nucleic acid
<213> Zea mays

<400> 442

cggacgcgtg ggctgtcggg gagatcgctt gtggcgacga cggcgccctgt ggccacgccc 60
gggtccagca cggcgcccaa ggatgggaag aagaccgtgc ggaggggctt ggtggtgatc 120
acgggcgctg cgtcgggggtt gggcctggcg gcggccaagg cgctggcgga gaccggcaag 180
tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 240
ggcatggcgg acggcagcta caccatcatg cacctggacc tggccttcct cgacagcgtg 300
cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cg 352

<210> 443
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 443

acgggcgctg cgtcgggggtt gggcctggcg gcggccaagg cgctggcgga gaccggcaag 60
tggcacgtgg tgatggcctg ccgcgacttc ctcaaggcgg ccaaggcggc caagggcgcc 120
ggcatggcgg acggcagcta caccatcatg cacctggacc tggccttcct cgacagcgtg 180
cggcagttcg tggacagctt ccggcgcgcc ggcatgccgc tcgactcgct cgtctgcaac 240
gccgccatct accggcccaac ggcatagacg ccgacgttc 279

<210> 444
<211> 221
<212> nucleic acid
<213> Zea mays

<400> 444

aaagcgcac gatctcgctg tcgtcactcc tcgtcaccca gccaaaggcg tggcggagac 60
cggcaagtgg cacgtggtga tggcctgccg cgacttcctc aaggcgccca aggcggccaa 120
gggcgcgggc atggcggacg gcagctacac catcatgcac ctggacctgg cctccctcga 180

cagcgtgcgg cagttcgtgg acagcttccg gcgcgcgggc a 221

<210> 445
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 445

agtgcagcct cgccgtcgcg gcgaaggaca cggcattcct tagcgtatcc cagaagaagg 60
tgcaggcggc gtcgctgtcg gtgagaacgc ggggtggcgac gacggcgcct gtggccacgc 120
cgggggtccag caccggcgcc aaggatggga agaagaccgt gcggcagggc gtggtggtga 180
tcacggggcg gtcgtcgggg ttgggcctgg cggcgcccaa ggcgctggcg gagaccggca 240
agtggcacgt ggtgatggcc tgccgcgact tcctcaaggc ggccaatgcg gccaagggcg 300
ccggcatggc 310

<210> 446
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 446

cccacgcgtc cgcggcgaag gacacggcat tccttagcgt atcccagaag aaggtgcagg 60
cggcgctcgt gtcggtgaga acgcgggtgg cgacgacggc gcctgtcgcc acgccgggggt 120
ccagcacggc ggccaaggat gggaagaaga ccgtgcggca gggcgtggtg gtgatcacgg 180
gcgcgtcgtc ggggttgggc ctggcgggcg ccaaggcgct ggcgagagacc ggcaagtggc 240
acgtggtgat ggctgcccgc gacttcctca aggcggccaa ggcgggccaag ggcgc 295

<210> 447
<211> 444
<212> nucleic acid
<213> Zea mays

<400> 447

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cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gtcctctca tccaccctct 120
catccgtccc caagaagtgc agcctcgccg tcgcgggcaa ggacacggca ttccttagcg 180

tatcccagaa ggtcagtgat agctgcatc tgcattgctgc actcgcagtc acaatgcgct 240
tgaattgaac gtgtcaactca ctctgtcgtg agcatgccat gcgtgcagaa ggtgcaggcg 300
gcgtcgtctgt cggtgagagt cacttcgcca tctaccggcc caccgcaagg acgccgacgt 360
tcacggcgga cggatacgag atgagcgtcg gcgtcaacca cctggggccac ttcctcctgg 420
cgcgcttgc cctggacgac atgc 444

<210> 448
<211> 423
<212> nucleic acid
<213> Zea mays

<400> 448

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gatctcgtg tcgtcaactcc tcgtcaccca gccacgaaca gaggcaccac ccagcatggc 120
cctgcaggcg gcgtcctcc catccacct ctcattcgtc cccaagaagt gcagcctcgc 180
cgtcgcggcg aaggacacgg cattccttag cgtatcccag aagaaggtgc aggcggcgtc 240
gctgtcggcg agaacgcggg tggcgacgac ggcgcctgtg gccacgccgg ggtccagcac 300
ggcggccaag gatgggaaga agaccgtgcg gcagggcgtg gtggtgatca cgggcgcgtc 360
gtcgggggtg ggcctggcg cggccaaggc gctggcggag accggcaagt ggcacgtggt 420
gat 423

<210> 449
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 449

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aggcggcgct cctcccatcc accctctcat ccgtcccaa gaagtgcagc ctcgccgtcg 120
cggcgaagga caccgcatc cttagcgtat cccacggcgc ggacgccgac gttcacggcg 180
gacgggtacg agatgagcgt cggcgtcaac cacctgggcc acttcctcct ggcgcgcctg 240
ctcctggacg acatgcagaa gtccgactac acgtcccg 279

<210> 450

aagtgcagcc tcgccgtcgc ggccaaggat caggcattcc ttagcgtatc ccagaagaag 180
gtgcaggcgg cgtcgtctgtc ggtgagaacg cgggttgcca cgacggcgcc tgttgccacg 240
ccgggggtcca gcacggcggc caaggatggg aagaagaccg tgcggcaagg cgtggtggtg 300
atcacgggcg cgtcgtcggg gttggg 326

<210> 453
<211> 338
<212> nucleic acid
<213> Zea mays

<400> 453

gagtcacttc gccacgaaca aaagcgcac gatctcgtctg tcgtcactcc tcgtcaccca 60
gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgtcctctcc catccaccct 120
ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180
cgtatcccag aagaaggtgc aggcggcgctc gctgtcggtg agaacgcggg tggcgacgac 240
ggcgcctgtg gccacgccgg ggtccagcac ggcgccaag gatgggaaga agaccgtgcg 300
gcagggcggtg gtggtgatca ctggcgcgctc gtcggggt 338

<210> 454
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 454

cttcgccacg aacaaaagcg catcgatctc gctgtcgtca ctctcgtca ccagccacg 60
aacagaggca ccaccagca tggccctgca ggcggcgctc ctcccatcca ccctctcatc 120
cgtccccaag aagtgcagcc tcgccgtcgc ggccaaggac acggcattcc ttagcgtatc 180
ccagaagaag gtgcaggcgg cgtcgtctgtc ggtgagaacg cgggtggcga cgacggcgcc 240
tgtggccacg ccgggggtcca gcacggcggc caa 273

<210> 455
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 455

gccacgaaca aaagcgcata gatctcgctg tcgtcactcc tcgtcaccca gccacgaaca 60
gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct ctcatccgtc 120
cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag cgtatcccag 180
aagaaggtgc aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac ggcgcctgtg 240
gccacgccgg ggtccagcac ggcggccaag gatgggaaga agaccgtgcg gcaggg 296

<210> 456
<211> 314
<212> nucleic acid
<213> Zea mays

<400> 456

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cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcggggtcg tcggatccac 120
gctgtcatcc gtccccgaga agtgcagcct cgcgctcgcg gcgaaggta cggcattcct 180
tagcgtatcc cagaagaagg tgcaggcggc gtcgggtgcg gtgagaacgc ggggtggcgac 240
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gcggcagggc gtgg 314

<210> 457
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 457

gagtcacttc gccacgaaca aaagcgcata gatctcgctg tcgtcactcc tcgtcaccca 60
gccacgaaca gaggcaccac ccagcatggc cctgcaggcg gcgctcctcc catccaccct 120
ctcatccgtc cccaagaagt gcagcctcgc cgtcgcggcg aaggacacgg cattccttag 180
cgtatcccag aagaaggtgc aggcggcgtc gctgtcggtg agaacgcggg tggcgacgac 240
ggcgccctgt gccacgccgg ggtccagcac ggcggccaag gatggga 287

<210> 458
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 458
 cagagtcaact tcgccacgaa caaaagcgca tcgatctcgc tgcgtcaact cctcgtcacc 60
 cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120
 ctctcatccg tccccaagaa gtgcagcctc gccgtcgcgg cgaaggacac ggcattcctt 180
 agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240
 acggcgcttg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300
 cggcagggcg tg 312

<210> 459
 <211> 321
 <212> nucleic acid
 <213> Zea mays

<400> 459
 gtcacttcgc cacgaacaaa agcgcacga tctcgtgtc gtcactctc gtcaccacgc 60
 cacgaacaga ggcaccaccc agcatggccc tgcaggcggc gctcctcca tccaccctct 120
 catccgtccc caagaagtgc agcctcgccg tcgcggcgaa ggacacggca ttccttagcg 180
 tatcccagaa gaagggtcag gggcgctcgc tgcgggtgag aacgcgggtg gcgacgacgg 240
 cgctgtggc cacgccgggg tccagcacgg cggccaagga tgggaagaag accgtgcggc 300
 agggcggtgt ggtgatcacg g 321

<210> 460
 <211> 281
 <212> nucleic acid
 <213> Zea mays

<400> 460
 cttcgccacg aacaaaagcg cgtcgatctc gctgtcgtca ctctcgtca cccagccacg 60
 aacagaggca ccaccacgca tggccctgca ggcggcgctc ctcccatcca ccctctcatc 120
 cgtccccaag aagtgcagcc tcgccgtcgc ggcgaaggac acggcattcc ttagcgtatc 180
 ccagaagaag gtgcaggcgg cgtcgtgtc ggtgagaacg cgggtggcga cgacggcgcc 240
 tgtggccacg ccgggggtcca gcaggcggcc aaggatggga a 281

<210> 461

<211> 314
 <212> nucleic acid
 <213> Zea mays

<400> 461

cagagtcact tcgccacgaa caaaagcgca tcgatctcgc tgctcgtcact cctcgtcacc 60
 cagccacgaa cagaggcacc acccagcatg gccctgcagg cggcgctcct cccatccacc 120
 ctctcatccg tccccaaaga gtgcagcctc gccgtcgcgg cgaaggacac ggcattcctt 180
 agcgtatccc agaagaaggt gcaggcggcg tcgctgtcgg tgagaacgcg ggtggcgacg 240
 acggcgcctg tggccacgcc ggggtccagc acggcggcca aggatgggaa gaagaccgtg 300
 cggcatggcg tggt 314

<210> 462
 <211> 351
 <212> nucleic acid
 <213> Zea mays

<400> 462

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60
 ctggagctgg aacaaggact cggcgtcgtt cgagaaccag ctgtcgcagg aggccagcga 120
 tccggagaag gccaaagaagc tctgggagat cagcgagaag ctcgtggggc ttgcctgagc 180
 tcgccggcac ggcacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240
 tattatgtgt accattagca tccattttgt ttgtttctag aagttggtaa tgaccgtcgg 300
 agaagagcct gtaattgttc gatcatgtat tgcttacaat ttttttttaa a 351

<210> 463
 <211> 327
 <212> nucleic acid
 <213> Zea mays

<400> 463

gtccggcaag atgctggcgc aggtggtcag cgaccccagc ctcaccaagt cgggggtgta 60
 ctggagctgg aacaaggact cggcgtcgtt cgagaaccag ctgtcgcagg aggccagcga 120
 tccggagaag gccaaagaagc tctgggagat cagcgagaag ctcgtggggc ttgcctgagc 180
 tcgccggcac ggcacagcga catgatggat ctgtcgagca gaggagcttt cgcttcgttg 240

tattatgtgt accattagca tccattttgt ttgtttctag aagttggtaa tgaccgtcgg 300
agaagagcct gtaattgttc gatcatg 327

<210> 464
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 464

ggcctgccgc gacttcctca aggcggccaa ggcggccaag ggcgccggca tggcggacgg 60
cagctacacc atcatgcacc tggacctggc ctcttcgac agcgtgcggc agttcgtgga 120
cagcttcggc gcgcgcggca tgccgctcga ctgcctcgtc tgcaacgccg ccatctaccg 180
gccacggcg cggaacgcca cgttcacggc ggacgggtac gagatgagcg tcggcgtcaa 240
ccacctgggc cacttcctcc tggcgcgccct gtcctggac gacatgcaga agtccgacta 300
cccg 304

<210> 465
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 465

cggcattggc gacggcagct acaccatcat gcacctggac ctggcctccc tcgacagcgt 60
gcggcagttc gtggacagct tccggcgcgc cggcattgcc ctgcactcgc tcgtctgcaa 120
cgccgccatc taccggccca cggcgcggac gccgacgttc acggcggacg ggtacgagat 180
gagcgtcggc gtcaaccacc tgggccactt cgtcctggcg cgctgctcc tggacgacat 240
gcagaagtcc gactactcgt cccgccgcct cgtcatcctc ggctc 285

<210> 466
<211> 147
<212> nucleic acid
<213> Zea mays

<400> 466

cccacgcgtc cgcacacgcg tccggtggac agcttcggc gcgccggcat gccgtcgac 60
tcgctcgtct gcaacgccgc catctaccgg cccacggcgc ggacgccgac gttcacggcg 120

gacgggtacg agatgagcgt ccgcgtc 147

<210> 467
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 467

actaaatgcc gaggtgatgg aacttgacct gctctccctc gactcggtcg taaaatttgc 60
tgatgcttgg acagctcgta tggcaccgct gcacgtgttg atcaacaatg ctgagctctt 120
cgctatagga gaacccaac atttttccaa ggatggacat gaagaacaca tgcaagtga 180
ccatcttgca cctgcattac tggcgatgct gcttatacct tcccttctcc gaggttctcc 240
cagcagaatt gtaaacgtta attcaatcat gcacagtgtg 280

<210> 468
<211> 277
<212> nucleic acid
<213> Zea mays

<400> 468

ctcaaatagc aagctggcac aggtaaaatt cagtagcatg cttcacaaga aaattcctgc 60
agaggctggc atcgggtgtag tttgcgcttc tcttgaatt gtcgacacga acgttgcaag 120
agctcttcct aagattgtcg tagccgcgta ccatttgatt ccctacttca tatttgacgc 180
tcaagaaggt tctaggagtg cactgtttgc agcatccgat cccaagtcc cggaatactg 240
cgagacgctc aagtcggagg actggccagt ttgtgcc 277

<210> 469
<211> 436
<212> nucleic acid
<213> Zea mays

<400> 469

ggttctccca gcagaattgt taacgttaat tcaatcatgc acagtgtagg ttttgttgat 60
gctgaagatt tgaacttgag aaaacataaa tatagaagtt ggttggcgta ttcaaatagc 120
aagttggcac aggtaaaatt tagtagcatg cttcataaga gaattcctgc agaagctggc 180
atcagcataa tttgtgcttc tcttgaatt gtcgacacga atgttacaag agaccttctc 240

aagattgttg tagctgcata ccattttctt ccctacttca tattcgatgg tcaagaaggt 300
tctaggagtg cactgtttgc agcatgtgac ccccaagttc cagagtactg tgagatgctc 360
aagtcggaag actggccagt ctgtgcttgc attaactacg actgtaatcc gatgaacgcg 420
tctgaagaag cgcaca 436

<210> 470
<211> 335
<212> nucleic acid
<213> Zea mays

<400> 470

gtagaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60
tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120
gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgc 180
ctgtttgcag catgtgaccc ccaagttcca gagtactgtt gagatgctca agtcggaaga 240
ctggccagtc tgtgcttgca ttaactacga ctgtaatccg atgaacgcgt ctgaagaagc 300
gcacagcttg ataccttcgc agctgggtctg ggaga 335

<210> 471
<211> 343
<212> nucleic acid
<213> Zea mays

<400> 471

gtaaaatgta gtagcatgct tcataagaga attcctgcag aagctggcat cagcataatt 60
tgtgcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120
gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgc 180
ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggtagac 240
tggccagtct gtgcttgcac taactacgac tgtaatccga tgaacgcgtc tgaagaagcg 300
cacagccttg aaacctcgca gctgggtctgg gagaagcgct cga 343

<210> 472
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 472
 gtaaaattta gtagcatgct tcataagata attcctgcag aagctggcat cagcataatt 60
 tgtgtcttctc ctggaattgt cgacacgaat gttacaagag accttcctaa gattgttgta 120
 gctgcatacc gttttcttcc ctacttcata ttcgatggtc aagaaggttc taggagtgc 180
 ctgtttgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240
 tggccagtct gtgcttgcac ta 262

<210> 473
 <211> 256
 <212> nucleic acid
 <213> Zea mays

<400> 473
 gcttcataag agaattcctg cagaagctgg catcagcata atttgtgctt ctcttggaat 60
 tgtcgacacg aatgttaca gagaccttcc taagattggt gtagctgcat accgttttct 120
 tcctacttc atattcgatg gtcaagaagg ttctaggagt gactggttg cgcatgtga 180
 cccccaagtt ccagagtact gtgagatgct caagtcggaa gactggccag tctgtgcttg 240
 cattaactac gactgt 256

<210> 474
 <211> 208
 <212> nucleic acid
 <213> Zea mays

<400> 474
 gcttcataag agaattcctg cagaagctgg catcagcata atttgtgctt ctcttggaat 60
 tgtcgacacg aatgttaca gagaccttcc taagattggt gtagctgcat accgttttct 120
 tcctacttc atattcgatg gtcaagaagg ttctaggagt gactggttg cgcatgtga 180
 cccccaagtt ccagagtact gtgagatg 208

<210> 475
 <211> 338
 <212> nucleic acid
 <213> Zea mays

<400> 475

gtatgattta gtagcatgct gcataagaga gttcctgcag aagctggcat cagcataatt 60
 tgtgcttctc ctggaattct cgacacgaat gttacgagaa tccttcctaa gattgttgta 120
 gctgcataacc gttgtcttcc ctacttcata ttcgatggtc aacaaggttc taggagtgc 180
 ctgtctgcag catgtgaccc ccaagttcca gagtactgtg agatgctcaa gtcggaagac 240
 tggccagtct gtgcttgcac taactacgac tgtaatccga tgaacgcgtc tgaagaagcg 300
 cacagccttg aaacctcgca gctggctctgg gagaagac 338

<210> 476
 <211> 248
 <212> nucleic acid
 <213> Zea mays

<400> 476

gattgatgct gaagatttca acttgagaaa acataaatat agaagttggt tggcgtattc 60
 aaatagcaag ttggcacagg taaaatttag tagcatgctt cataagagaa ttcctgcaga 120
 agctggcatc agcataattt gtgcttctcc tggaattgtc gacacgaatg ttacaagaga 180
 ccttcctaag attgttgtag ctgcatacgg tttccccaa atcaaaatcg atggtcaaga 240
 aggttcta 248

<210> 477
 <211> 341
 <212> nucleic acid
 <213> Zea mays

<400> 477

gagatcttcc taagattgtc gtagccgcgt accatttgat tccctacttc atatttgacg 60
 ctcaagaagg ttctaggagt gcactgtttg cagcatccga tccccagtc ccggagtact 120
 gcgagacgct caagtcggag gactggccag tttgtgcctg cattaactat gactgtagtc 180
 cgatgaatgc gtctgaagaa ggcacaaatc tggagacctc gcagctggtc tgggagaaga 240
 cactggagat ggtcggcctt ccgcgggatg ccctggagaa gctcatcgcc ggagaatcag 300
 ttcagtgcg ttacggacaa caggatacaa cttaactttt t 341

<210> 478
 <211> 383
 <212> nucleic acid

<213> Zea mays

<400> 478

gtgcactggt tgcagcatcc gatccccaag tcccgggaata ctgcgagacg ctcaagtcgg 60
aggactggcc agggggtgcc tgcattaact atgactgtag tccgatgaat gcgtctgaag 120
aagcgcacaa tcttgagacc tcgcagctgg tctgggagaa gacactggag atggtcggcc 180
ttccgccgga tgccctggag aagctcatcg ccggagaatc agttcagtgc cgttacggac 240
aacaggatac aacttttttag ttagcagttt agaggtgggt tggttcggtt ttatgtcatt 300
ttgatcctaa atttgcaggg aggaaaacac agggaaagga gaaaaagaat ttgttgacag 360
ctaccaaatc ttggctcttt tct 383

<210> 479

<211> 166

<212> nucleic acid

<213> Zea mays

<400> 479

ggaggactgg ccattttgtg cctgcatgaa ctatgactgt agtccgatga atgcgtctta 60
caggagcgca caatcttgag acctcgagc tggctctggga gaagacactg gagatggctg 120
gcgttccgcc ggatgccctg gagaagctca tcgccggaga atcagt 166

<210> 480

<211> 382

<212> nucleic acid

<213> Zea mays

<220>

<221> unsure

<222> (11), (32), (34)

<223> unsure at all n locations

<400> 480

agtgaggagt ngcttccaaa actgatgcat gnantcatgc aatacgcat ccggtcgacc 60
actcgtaccc tggtaaacc gaaggattgg atctgattat ccgctattct tgtgtccctt 120
acgcttgag cacgatggca gtatgatcat aaaccggatg aaggaaccgc cgaacggaaa 180
cttctataag cctgcataaa cccgatagat tggatctgat tatcccttat tcttgagatc 240
tttagttaga gttttccctt ctgtagggct aaaaccacgt gcagcttcat gatatatcct 300

gcctctgtac aatcgtgaac aaatattacg tattaatgct ctatctgcct gtattatata 360
tgctgctttt tgcccatgtg aa 382

<210> 481
<211> 358
<212> nucleic acid
<213> Zea mays

<400> 481

cctgcataaa cccgaaggat tggatctgat tagccgttat tcttgtgtcc cttccgcttg 60
cagcacgatg gcagtatgat cataaaccgg aagaaggaac cgaggaatgg aaacttctgg 120
aagcctgcat aaaccggaag gattggatct gattagccgt tattcttgag atcttttgtt 180
agagttttcc cttctgtagg gctaagacca cgtgcagttt cattatatat ttgcatctg 240
tagaatcgtg aataaatatg atgtagtaat gctgtagctg tctgtatcta tctgctgttt 300
tttcccatg tgaatgagag aaccattggc ttctgtatta cgaaggattc aggtttct 358

<210> 482
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 482

accggaagaa ggaaccgagg aatggaaact tctggaagcc tgcataaacc cgaaggattg 60
gatctgatta gccgtcattc ttgagatctt ttgttagagt tttcccttct gtagggctaa 120
gaccacgtgc agtttcatta tttctttttg catctgtaga atcgtgaata aatatgatgt 180
agtaatgctg tagctgtttg tatctatctg ctgttttttc cccatgtgaa tgagtgaacc 240
attggcttct gtatttacga aggattcagg tttct 275

<210> 483
<211> 335
<212> nucleic acid
<213> Zea mays

<400> 483

cttgaagagg acgtgaagca tttccattct gttcaaaagc aagcatgtga taaatttgat 60
ccaagttttc acccaagatt caaaaaatgg tgtgatgatt atttctatat taagcaccgt 120

aatgagcggc gtgggctagg tggaatatatt tttgatgacc ttaatgatta cgatcaagaa 180
atgctttctca actttgctac agaatgtgcg gactctgtac ttcttgcgta cataccgatc 240
atagaacggc ggaagaacac tccgttcaat gaggagcaca gggcatggca gcaattgcgg 300
agaggtcggt atgtggaggt caaccttggtc tacga 335

<210> 484
<211> 475
<212> nucleic acid
<213> Zea mays

<400> 484

caagaaatgc ttctcaactt tgctacagaa tgtgaggact ctgtacttcc tgcgtacata 60
ccgatcatag aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa 120
ttgaggagag gtcgttatgt ggagttcaac cttgtctacg accgtggtag aacatttggc 180
ctaaagactg gaggaaggat tgagagcata cttgtgtccc ttccacttac agcacgatgg 240
cagtatgac ataaaccgga agaaggaacc gaggaatgga aacttctgga agcctgcata 300
aaccggaagg attggatctg attagccgtt attcttgaga tcttttgtta gaagtttccc 360
ttctgtaggg ctaagaccac gtgcagtttc attatatatt ttgcatctgt agaatcgtga 420
ataaatatga tgtagtgatg ttgtagctgt ttggatctat ctgctggttt ttccc 475

<210> 485
<211> 329
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (221), (256), (283)
<223> unsure at all n locations

<400> 485

atcaagaaat gctttctcaac ttgctacag aatgtgcgga ctctgtactt cctgcgtaca 60
taccgatcat agaacggagg aagaacactc cgttcaacga ggagcacagg gcatggcagc 120
aattgcggag aggtcggtat gtggagttca accttgtcta cgaccgtggt acaacatttg 180
gcctaaagac tggaggaagg attgagagca tacttgtgtc ncttccactt acagcacgat 240

ggcagtatga tcatanaccg gaagaaggaa ccgacgaatg ganacttctg gaagcctgca 300
tagacccgaa ggattggatc tgattagcg 329

<210> 486
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 486

caagattcaa aatatggtgt gatgattatt tctatattaa gcaccgtaat gagcggcgtg 60
ggctaggtgg aatatTTTTT gatgacctta atgattacga tcaagaaatg cttctcaact 120
ttgctacaga atgtgcggac tctgtacttc ctgcgtacat accgatcata gaacggagga 180
agaacactcc gttcaacgag gagcacaggg catggcagca attgcggaga ggtcgttatg 240
tggagttcaa cttgtctac gaccgtggta 270

<210> 487
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 487

cgcggcgtgg gctaggtgga atatTTTTTg atgaccttaa tgattacgat caagaaatgc 60
ttctcaactt tgctacagaa tgtgcggact ctgtacttcc tgcgtacata ccgatcatag 120
aacggaggaa gaacactccg ttcaacgagg agcacagggc atggcagcaa ttgcggagag 180
gtcgttatgt ggagttcaac cttgtctacg accgtggtac aacatttggc ctaaagactg 240
gaggacggat tgacag 256

<210> 488
<211> 247
<212> nucleic acid
<213> Zea mays

<400> 488

cttaatgatt acgatcaaga aatgcttctc aactttgcta cagaatgtgc ggactctgta 60
cttctcgcgt acataccgat catagaacgg cggaagaaca ctccgttcaa tgaggagcac 120
agggcatggc agcaattgcg gagaggctgt tatgtggagt tcaaccttgt ctacgaccgt 180

ggtaccacat ttggcctaaa gactggagga aggattgaga gcatacttgt gtcccttccg 240
cttacag 247

<210> 489
<211> 236
<212> nucleic acid
<213> Zea mays

<400> 489

cccacgcgtc cgctccgttc aatgaggagc acagggcatg gcagcaattg cggagaggtc 60
gttatgtgga gttcaacctt gtctacgacc gtggtaccac atttggccta aagactggag 120
gaaggattga gagcatactt gtgtcccttc cgcttacagc acgatggcag tatgatcata 180
aaccggaaga aggaaccgag gaatggaaac ttctggaagc ctgcataaac ccgaag 236

<210> 490
<211> 430
<212> nucleic acid
<213> Zea mays

<400> 490

gggggaggcc gccagaacg gggccgccgc cgcggatggc cacaagcctg ggccggtggc 60
attcttcgcc ggggggatta gttcgggtgct tcacccaag aaccatttg ctccaacatt 120
gcattttaac taccgttact ttgagacgga tgcacaaaa gatgcacctg gtgcaccaag 180
acaatggtgg ttccggcggg gtactgactt gactccttca tatatcattg aagaggatgt 240
gaagcatttc cattctgttc aaaagcaagc atgtgataaa tttgatcaa gttttcaccc 300
aagattcaaa aaatggtgtg atgattatct ctatattaag caccgtaatg agcggcgtgg 360
gctaggtgga atatcttttg atgaccttaa tgattacgat caagaaatgc ttctcaactt 420
tgctacagaa 430

<210> 491
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 491

gggccgccgc cgcggatggc cacaagcctg gcccgtgcc attcttcgcc ggggggatta 60

gttcggtgct tcacccaag aaccatttg ctccaacatt gcattttaac taccgttact 120
 ttgagacgga tgcacaaaa gatgcacctg gtgcaccaag acaatggtgg ttcggcggtg 180
 gtactgactt gactccttca tacatcattg aagaggacgt gaagcatttc cattctgttc 240
 aaaagcaagc atgtgataaa tttgatccaa gttttcacc aagattcaaa aaatggtgtg 300
 atga 304

<210> 492
 <211> 307
 <212> nucleic acid
 <213> Zea mays

<400> 492

ggaggccgcc aagaacgggg ccgccgccgc ggatggccac aagcctggcc ccgtgccatt 60
 cttcgccgcg gggattagtt cgggtgcttca cccaagaac ccatttgctc caacattgca 120
 ttttaactac cgttactttg agacggatgc accaaaagat gcacctggtg caccaagaca 180
 atggtgggttc ggcggtggta ctgacttgac tccttcatac atcattgaag aggacgtgaa 240
 gcatttccat tctgttcaaa agcaagcatg tgataaattt gatccaagtt ttcacccaag 300
 attcaaa 307

<210> 493
 <211> 173
 <212> nucleic acid
 <213> Zea mays

<400> 493

gcacgagaaa agatgcacct ggtgcaccaa gacaatggtg gttcggcggt ggtactgact 60
 tgactccttc atacatcatt gaagaggacg tgaagcattt ccattctgtt caaaagcaag 120
 catgtgataa atttgatcca agttttcacc caagattcaa aaaatggtgt gat 173

<210> 494
 <211> 118
 <212> nucleic acid
 <213> Zea mays

<400> 494

gttactttga gacggatgca ccaaaagatg cacctggtgc accaagacaa tgggtggttcg 60

gcggaggtac tgacttgact ccttcataca tcattgaaga ggacgtgaag catatcca 118

<210> 495
<211> 304
<212> nucleic acid
<213> Zea mays

<400> 495

agaagccgca aaaactgccc tggaccgagg tggtacgat gggctgttcc taggagggaa 60

ctatgttgca ggagttgacc tgggcagatg cgttgagggc gcgtatgaaa gtgcctcgca 120

aatatctgac ttcttgacca agtatgccta caagtgatga aagaagtgga gcgctacttg 180

ttaattgttt atgttgcata gatgaggtgc ctacgggaaa aaaaagcttt aatagtattt 240

tttattctta ttttgtaaat tgcatttctg ttcttttttc tgtcattaat tacttatatt 300

ttag 304

<210> 496
<211> 295
<212> nucleic acid
<213> Zea mays

<400> 496

gagggaaacta tgttgcagga gttgccctgg gcagatgcgt tgagggcgcg tatgaaagtg 60

cctcgcaaatt atctgacttc ttgaccaagt atgcctacaa gtgatgaaag aagtggagcg 120

ctacttgтта atcgtttatg ttgcatagat gaggtgcctc cggggaaaaa aagcttgaat 180

agtatttttt attcttattt tgtaaattgc atttctgttc ttttttctat cagtaattag 240

ttatatttta gttctgtagg agattgttct gttcactgcc cttcaaaaga atttt 295

<210> 497
<211> 305
<212> nucleic acid
<213> Zea mays

<400> 497

cgttcttcga tctcatgagc atcccaggga agctcagggc cggcttaggc gcgcttgcca 60

tccgcccgcc tctccaggc cgcgaagagt cagtggagga gttcgtgcgc cgaacttcgt 120

gctgaggtct tcgagcgcct cattgagcct ttctgctcag gtgtctatgc tggatgatcct 180

tctaagctca gcatgaaggc tgcatttggg aaggtttggc ggttggaaga aactggaggt 240
 agtattattg gtggaacccat caagacaatt caggagagga gcaagaatcc aaaaccactg 300
 aggga 305

<210> 498
 <211> 270
 <212> nucleic acid
 <213> Zea mays
 <400> 498

ggacctggcc gcccgctcc tccaggccgc gaagagtcag tggaggagtt cgtgcgccgc 60
 aatcttgggtg ctgagggtctt cgagcgctc attgagcctt tctgctcagg tgtctatgct 120
 ggtgacccctt ctaagctcag catgaaggct gcatttggga aggtttggcg gttggaagaa 180
 actggaggta gtattattgg tggaaacatca agacaattca ggagaggagc aagaatccaa 240
 aaccactgag ggatgccccgc cttccgaagc 270

<210> 499
 <211> 423
 <212> nucleic acid
 <213> Zea mays
 <400> 499

atccaaagga agcaattaga aaagaatgct taattgatgg ggagctccag ggcgttgggc 60
 agttgcatcc acgtagtcaa ggagttgaga cattaggaac aatatacagt tcctcactct 120
 ttccaaatcg tgctcctgac ggtaggggtgt tacttctaaa ctacatagga ggtgctacaa 180
 acacaggaat tgtttccaag actgaaagtg agctggtcga agcagttgac cgtgacctcc 240
 gaaaaatgct tataaattct acagcagtgg accctttagt ccttgggtgtt cgagtttggc 300
 cacaagccat acctcagttc ctggtaggac atcttgatct tctggaagcc gcaaaagctg 360
 ccctggaccg aggtggctac gatgggctgt tcctaggagg gaactatgtt gcaggagttg 420
 ccc 423

<210> 500
 <211> 314
 <212> nucleic acid
 <213> Zea mays

<400> 500

cacgcccctg ccggccatcg ggggtgccgtt cgatatctcg gactccaagg ggcccgtgat 60
ccaatcgcca gtacgggtcca aagagcaggt gagggagctc gtcccatcg accttgatat 120
gctccagttc gtcggggagt cactaaagat tctgcgaaat gagattgatg gaaaagctgc 180
tttgctagga tttgtggggg ccccatggac aattgcaact tacattgttg aaggggggat 240
gaccaatacg tacacaaata taaagagcat gtgccataca gctccagatg tcttgaaggg 300
tcttctctct cact 314

<210> 501

<211> 287

<212> nucleic acid

<213> Zea mays

<400> 501

gaaggaggtt catcaaagaa ctttacattg attaagaaaa tggccttctc agaaccagcg 60
attctacaca atttgctaca gaagttcaca acatcaatgg ctaactatat taaataccaa 120
gcggacaatg gggcgagggc tgtccaaatt ttcgattcat gggctactga actcagcccg 180
actgattttg aggagtttag cctgccttat ctaaagcaga tagtggatag tgttagggaa 240
acacatccta acttgcctct gatactctac gcaagtggat ctggggg 287

<210> 502

<211> 272

<212> nucleic acid

<213> Zea mays

<400> 502

gtccagtgtg tacagatatt tgattcatgg ggtggacagc ttccacctca tgtatgggag 60
cagtgggtcaa aaccatatat caaacaggag ttgatgttat tgggcttgac tggacagtgg 120
acactactga tggaagggtg cgccttggta atggcattag tgtacaaggg aatgtggatc 180
cagcattttt gttctcacca ttaccagtac tgactgatga aattcataga gttgtgaaag 240
cagctgggtcc aaaaggtcat accttaatat gg 272

<210> 503

<211> 407

<212> nucleic acid

<213> Zea mays

<400> 503

agggcagagg gcaggaaaag attgggatct aacacagcag tccaagggaa cgtggatcct 60
 ggtgttcttt ttggatccaa agagtttata agcaggcgga ttacgacac tgtgcagaag 120
 gctggcaatg ttggacatgt actgaacctt ggccatggca tcaaggttgg aactccggag 180
 gaaaatgttg ctacttctt cgaggctgca aaagggatca gatactaaag aaccttgcac 240
 gggtctttcc tttctccaaa tcggcagaag ttgtagagtc ggcggtcgag gatagatgca 300
 gaaagccatg tgcagtatag agtccctgaa aacatttttg tgactgattc tgtctgtcgc 360
 aattcaagtt ccggtttcaa tgtgatattg taagcagatt tgagacg 407

<210> 504

<211> 418

<212> nucleic acid

<213> Zea mays

<400> 504

agcaagtga ggccagggtg cgggaggcag gcctggcacc agtgcccatg atcatctttg 60
 ctaaggatgg gcattttgcc ctggaggagc tggcccaagc tggctatgag gtggttgggc 120
 ttgactggac agtggcccca aagaaagccc gggagtgtgt ggggaagacg gtgacattgc 180
 agggcaacct ggacctctgt gccttgtatg catctgagga ggagatcggg cagtttgtga 240
 agcagatgct ggatgacttt ggaccacatc gctacattgc caacctgggc catgggcttt 300
 atcctgacat ggaccagaa catgtgggcg cctttgtgga tgctgtgcat aaacactcac 360
 gtctgcttcg acagaactga gtgtatacct ttaccctcaa gtaccactaa cacagatg 418

<210> 505

<211> 508

<212> nucleic acid

<213> Zea mays

<220>

<221> unsure

<222> (39)

<223>

<400> 505

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tccggttaatt cgccggggga ggacccaccg cgtgccgcga ggggctgcaa ccacctactc 120
 attgcgtttt caatggcaac aacgtgtacg tcggtctcgg tgccgtgcac cttcctcttg 180
 cgccggcaggt ccgcccgcac catgcccaaga cgcaagcagc tcacggccgt ccgctgcagc 240
 gccgtcagac agggcgtagt ggaagaggcc tcgccggga ccgcggaaga tccgctgctg 300
 gtgagcgcaa tcagagggac gaaggctcag aagccaccg tatggctcat gaggcagcc 360
 gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttcgtt ccgtgaaaga 420
 tcagaaaatg tcgacctagt tgttgagatc tctttgcaac catggaagg tttcaagcct 480
 gaaggaatca tcttggtctc ggacattc 508

<210> 506
 <211> 387
 <212> nucleic acid
 <213> Zea mays

<400> 506

cccacgcgtc cgcccactcg tccgaaattt tcgattcatg ggctactgag ctcagcccgg 60
 ctgattttga ggagtttagc ctgccttata taaagcagat agtggatagt gttaggga 120
 cacatcctaa cttgcctctg atactctacg caagtggatc tgggggcttg ctggagaggc 180
 ttcctttgac aggtgttgat gttgtcagct tggactggac ggtcgatatg gcagagggca 240
 ggaaaagatt gggatctaac acagcagtc aagggaaacgt ggatcctggt gttctttttg 300
 gatccaaaga gtttataagc aggcggattt acgacactgt gcagaaggct ggcaatgttg 360
 gacatgtact gaaccttggc catggca 387

<210> 507
 <211> 288
 <212> nucleic acid
 <213> Zea mays

<400> 507

gccgctgctg gtgagcgcaa tcagaaggag gaaggctcag aagccaccg tctggctcat 60
 gaggcaggcc gggaggtaca tgaagagcta ccaattgctc tgcgagcggc atccttgctc 120
 cgtgaaagat cagaaaatgt cgacctagtt. gttgagatct ctttgcaacc atggaaggct 180
 ttcaagcctg atggagtcac cttgttctcg gacatcctta ctccacttcc tgggatgaac 240

ataccttttg acattgtgaa gggaaaaggt ccagtgatct atgatcca 288

<210> 508
 <211> 409
 <212> nucleic acid
 <213> Zea mays
 <400> 508

gtccgcgagc gctgcagcac ctccgatccc gcccgaatgg caacagcgtg tccgccgctc 60
 tcgctgccgt ccacctccct ctcccgccgc aggtccgccc gcgccgggcc cagacgcagg 120
 cagctcacgg ccgtccgctg cagcgccgtc ggagaggcgg tagtggagga ggccctcgccc 180
 gggacggcgg aagagccgct gctggtgagc gcaatcagag ggaggaaggt cgagaggcca 240
 cccgtctggc tcatgaggca ggccgggagg tacatgaaga gctaccaatt gctctgcgag 300
 cggatccctt cgttccgtga aagatcagaa aatgtcgacc tagttgttga gatctctttg 360
 caaccatgga aggttttcaa gcctgatgga gtcattctgt tctcggaca 409

<210> 509
 <211> 407
 <212> nucleic acid
 <213> Zea mays
 <400> 509

agccaagtcg tcgcctcccc gacccaacgt tttagacccc ttgcccgctc gcgagcgtg 60
 cagcacctgg gatcccgccc caatggcaac agcgtgtccg ccgctctcgc tgccgtccac 120
 ctccctcttc cgcggcaggt ccgcccgcgc cgggcccaga cgcaggcagc tcacggccgt 180
 ccgctgcagc gccgtcggag aggcggtagt ggaggaggcc tcgcccgga cggcggaaga 240
 gccgtgctg gtgagcgcaa tcagaggag gaaggctcag aggccaccg tctggctcat 300
 gaggaagcc gggaggtaca tgaagagcta ccaattgctc tcgagcgggt atccttcgtt 360
 ccgtgaaaga tcagaaaatg tcgacctagt tgtagatc tctttgc 407

<210> 510
 <211> 275
 <212> nucleic acid
 <213> Zea mays
 <400> 510

taaagattct gcgaaatgag attgatggaa aagctgcttt gctaggattt gtggggggccc 60
catggacaat tgcaacttac attgttaaag gggggatgac caacacatac acaaataata 120
agaacatgtg ccatacagct cccgatgtct taggtgtctt ctatctcatc ttgcagtagc 180
gatatctgac tatatcattt accaagttaa ctccggggcc cagtgtatac agatatttga 240
ttcatggggc ggacaacttc cacctcatgt gtggg 275

<210> 511
<211> 266
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (75)
<223>

<400> 511

tgccaagagc cgggccaagg ctgcgctcca cggccgtccg ggtcagcagc gagcaggagg 60
cggcgggcggc cgtenaggcg ccgtccggga ggaccatcga ggagtgcgag gccgacgccg 120
tcgctgggaa gttccctgct cccccgccgc tggttaggcc gaagcgccctg aaggaacgcc 180
ggagatcagg ccccttgaca tggcaaagcg cccccgtcgc aaccgcaaata cacctgctct 240
tagggctgca ttccaggaga cgagca 266

<210> 512
<211> 293
<212> nucleic acid
<213> Zea mays

<400> 512

gccgtacttg gacattatcc gactgcttcg ggatcattca gccctaccga ttgctgctta 60
ccagggtctcg ggcgagtact cgatgatcaa agccggcggg gccctgggca tgggtggacga 120
gcagaagggtg atgatggagt cgctcatgtg cctgcgcgag ccggcgccga cgtcacctctg 180
acctacttcg cccgtcacgc cgccgcgggtg ctgtgcggca tggggcccaa gtaggaggcg 240
aggcccgccc gccattcctg ccctgcactg tcattgtgga gttgagcgat gag 293

<210> 513

<211> 279
<212> nucleic acid
<213> Zea mays

<400> 513

actagattca catccaagat ttggagataa gaagacgtac cagatgaacc cagctaacta 60
cagagaagcc ctcatagaaa ccgcatcgga cgaggcagaa ggagccgaca ttctgctagt 120
gaaaccggga ttgccgtact tggacattat ccgactgctt cgggatcatt cagccctacc 180
gagtgtctgct taccaggtct cgggagagta ctcatgatc agagccggag gggccctggg 240
catggtggac gagcataagg tgatgatgga gtcgctcat 279

<210> 514
<211> 287
<212> nucleic acid
<213> Zea mays

<400> 514

cggacgcgtg gggttcattt tatggccctt ccgagaagct ttagattcaa atccaagatt 60
tggagataag acgacgtacc agatgaaccc agccaactac agagaagccc tcatagaaac 120
cgcagcggac gaggcagaag gagccgacat tctgctagtg aaaccgggat tgccgtactt 180
ggacatcatc cgactgcttc gggatcattc agccctaccg attgctgctt accaggtctc 240
gggagagtac tcgatgatca aagccggcgg gggccctgggc atggtgg 287

<210> 515
<211> 427
<212> nucleic acid
<213> Zea mays

<400> 515

ctttgtgctc ccattgttta tccatgaagg agaagaagat gtcctatcg gagctatggc 60
agggtgctat aggcttgggt ggaggcacgg gctgcttgac gaggtttaca aggcccgcca 120
tggttggtgtt aatagtttcg ttctctttcc taaagttccc gatgcattga agtctccaac 180
aggagatgaa gcgtaacaag ataatggtct ggttccacgt acaatccgct tgctcaagga 240
caagttccct gatattgtta tctacacaga cgtcgcgtta gacccttatt catctgatgg 300
tcatgatggg attgtgaggg aagatggtgt aattatgaat gatgaaacag tttatcagtt 360

gtgcaaacag gctgtttcac aggctcgtgc cggtgctgat gttgtcagcc ctagtgacat 420
gatggat 427

<210> 516
<211> 303
<212> nucleic acid
<213> Zea mays

<400> 516

cccacgcgtc cgcaaggccc gcgatgttgg tgtaaatagt ttcgttctct ttcctaaagt 60
tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctggttcc 120
acgtacaatc cgcttgctca aggacaagtt ccctgatatt gttatctaca cagacgtcgc 180
gttagaccct tattcatctg atggtcatga tggattgtc aggaagatg gtgtaattat 240
gaatgatgaa acagtttatc agttgtgcaa acaggctgtt tcacaggctc gtgccggtgc 300
tga 303

<210> 517
<211> 277
<212> nucleic acid
<213> Zea mays

<400> 517

cttattcatc tgatggatcat gatggatttg tgaggaaga tgggtgtaatt atgaatgatg 60
aaacagttta tcagttgtgc aaacaggctg tttcacaggc tcgtgccggt gctgatgttg 120
tcagccctag tgacatgatg gatggccgga ttggagcact tcgtctctgt ctggacgccg 180
agggtttcca tgatgtctcc attatgtcct acaccgcaa gtatgccagt tcattttatg 240
gccctttccg agaagcttta gattcaaatc caagatt 277

<210> 518
<211> 300
<212> nucleic acid
<213> Zea mays

<400> 518

cccacgcgtc cgcaaggccc gcgatgtagg tgtaaatagt ttcgttctct ttcctaaagt 60
tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctggttcc 120

acgtacaatc cgcttgctca aggacaagtt cctgatatt gttatctaca cagacgtcgc 180
 gttagaccct tttcatctg atggatcatga tggatattgtt aggaagatg gtgtaattat 240
 gaatgatgaa acagttttatc agttgtgcaa acaggctgtt tcacaggctc gtgccggtgc 300

<210> 519
 <211> 306
 <212> nucleic acid
 <213> Zea mays

<400> 519

cccacgcgtc cgcccacgcg tccgcccacg cgtccgcca cgcgtccggg acaagttccc 60
 tgatattgtt atctacacag acgtcgcgtt agacccttat tcatctgatg gtcgatgatg 120
 tattgtgagg gaagatgggtg taattatgaa tgatgaaaca gtttatcagt tgtgcaaaca 180
 ggctgtttca caggctcgtg ccggtgctga tgtgtgcagc cctagtgaca tgatggatgg 240
 ccggattgga gcacttcgct ctgctctgga cgccgagggc ttccatgatg tctccattat 300
 gtcccta 306

<210> 520
 <211> 391
 <212> nucleic acid
 <213> Zea mays

<400> 520

acgaacgcgt gggcggacgc gtgggcggac gcgtgggaga acgcgtgggc ggacgcgtgg 60
 gtgaaggaga agaagatgct cctatcggag ctatgccagg gtgctatagg cttgggtgga 120
 ggcacgggct gcttgacgag gtttacaggg gcgcgcgatg ttgggtgttaa tagttttgtt 180
 ctcttttcta aagttcccga tgcattgaag tctccaacag gagatgaagc gtacaacgat 240
 aatgggtctgg ttccacgtac aatccgcttg ctcaaggaca agttccctga tattgtttatc 300
 tacacagacg tctctttttt ttcttagtca tctgatggtc actatggatg tgttacggaa 360
 gatggggtaa ttatgaatga tgaaacactt t 391

<210> 521
 <211> 191
 <212> nucleic acid
 <213> Zea mays

<400> 521
 agatgctcct atcggagcta tgccaggggtg ctataggctt ggggtggaggc acgggctgct 60
 tgacgaggtt tacaaggccc gcgatgttgg tgtaaatagt ttcgttctct ttcctaaagt 120
 tcccgatgca ttgaagtctc caacaggaga tgaagcgtac aacgataatg gtctgggtcc 180
 acgtacaatt c 191

<210> 522
 <211> 128
 <212> nucleic acid
 <213> Zea mays

<400> 522
 gttagaccct tattcatctg atggatcatga tggatattgtg aggggaagatg gtgtaattat 60
 gaatgatgaa acagtttatc agttgtgcaa acaggctggt tcacaggctc gtgccgggtgc 120
 tgatgttg 128

<210> 523
 <211> 301
 <212> nucleic acid
 <213> Zea mays

<400> 523
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 atggcggttca ccgtctcctt ctcccccgcc aacgttcaga tgctccaggc taggagtggc 120
 cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccggggc aaggctgcgc 180
 tccacggccg tccgggtcag cagcgagcag gaggcggcgg cggccgtcag ggcgccgtcc 240
 gggaggacca tcgaggagtg cgaggccgac gccgtcgtg ggaagtcc cgtctccccg 300
 c 301

<210> 524
 <211> 323
 <212> nucleic acid
 <213> Zea mays

<400> 524
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gctcggccat ggcgttcacc gtctccttct ccccgccaa cgttcagatg ctccaggcta 120
 ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaaga gccggggccaa 180
 ggctgcgctc caccggccgtc cgggtcagca gcgagcagga ggccggcgcg gccgtcaggg 240
 cgccgtccgg gaggaccatc gaggagtgcg aggccgacgc cgtcgtggg aagttccctg 300
 ctccccgcc gctggtagg ccg 323

<210> 525
 <211> 252
 <212> nucleic acid
 <213> Zea mays

<400> 525

cagattagca gcttctccgt gctgctgcgt ctctcctca tcgtcctctc cagtgtccag 60
 ctcgccatg gcgttcaccg tctccttctc ccccgccaaac gttcagatgc tccaggctag 120
 gagtggccac ggccacgcca cctttggaag ctgttccgcc gtgccaaagag ccggggccaaag 180
 gctgcgctcc acggccgtcc gggtcagcag cgagcaggag gcggcgcgcg ccgatcaggc 240
 gccgtccggg ag 252

<210> 526
 <211> 304
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (127)
 <223>

<400> 526

cacaggatta gcagcttctc cgtgctgctg cgtctcctcc tcctcgtcct ctccagtgtc 60
 cagctcggcc atggcggttc cgtctcctt ctccccgcc aacgttcaga tgctccaggc 120
 taggagntgg caccggccacg ccacctttgg aagctgttcc gccgtgccaa gagccgggcc 180
 aaggctgcgc tccacggccg tccgggtcag cagcgagcag gagcgcgcg cgcccgctcag 240
 ggcccgctcc gggaggacca tcgaggagtg cgaggccgac gccgtcgtg ggaagtcccc 300
 tgct 304

<210> 527
 <211> 295
 <212> nucleic acid
 <213> Zea mays

 <220>
 <221> unsure
 <222> (267),(291)... (292)
 <223> unsure at all n locations

 <400> 527

 cacaggatta gcagcttctc cgtgctgctg cgtctcctcc tcatcgctct ctccagtgtc 60
 aagctcggcc atggcggttca ccgtctcctt ctccccgcc aacgttcaga tgctccaggc 120
 taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgccaa gagccggggc 180
 aaggctgcgc tccacggccg tccgggtcag cagcgagcag gaggcggcgg cgcccgtcag 240
 gcgccgtccg ggaggacat cgaggantcg aagccgacgc cgtgctggga nnttc 295

 <210> 528
 <211> 239
 <212> nucleic acid
 <213> Zea mays

 <400> 528

 ccacgcgtcc gcagattagc agcttctccg tgctgctgcg tctcctctc atcgtcctct 60
 ccagtgtcca gctcggccat ggcgttcacc gtctccttct cccccgcaa cgttcagatg 120
 ctccaggcta ggagtggcca cggccacgcc acctttggaa gctgttccgc cgtgccaaaga 180
 gccgggcaa ggctgcgctc cacggccgtc cgggtcagca gcgagcagga ggcggcggc 239

 <210> 529
 <211> 302
 <212> nucleic acid
 <213> Zea mays

 <400> 529

 acaggattag cagcttctcc gtgctgctgc gtctcctct catcgtcctc tccagtgtcc 60
 agctcggcca tggcggtcac cgtctccttc tccccgcca acgttcagat gctccaggct 120
 aggagtggcc acggccacgc cacctttgga agctgttccg ccgtgccaa agccggggcca 180
 aggtgcgct ccacggccgt ccgggtcagc agcgagcagg aggcggcggc ggccgtcaag 240

gcgccgtccg ggaggacat cgaggagtgc gaggccgacg ccgtcgtctg gaagttccct 300
gc 302

<210> 530
<211> 242
<212> nucleic acid
<213> Zea mays

<400> 530

gccacgggtc cgcagtatta gcagcttctc cgtgctgctg cgtctcctcc tcatcgtcct 60
ctccagtgtc cagctcggcc atggcggtca ccgtctcctt ctcccagcc aacgttcaga 120
tgctccaggc taggagtggc cacggccacg ccacctttgg aagctgttcc gccgtgccaa 180
gagccggggc aaggctgcgc tcaacggccg tccgggtcag cagcgagcag gaggcggcgg 240
cg 242

<210> 531
<211> 255
<212> nucleic acid
<213> Zea mays

<400> 531

cccacgcgtc cgaccacgcg tccgcggacg ctggccccgg cgatgatgga cctctccagt 60
gtccagctcg gccatggcgt tcaccgtctc cttctcccc gccaacgttc agatgctcca 120
ggctaggagt ggccacggcc acgccacctt tggaagctgt tccgccgtgc caagagccgg 180
gccaaggctg cgctccacgg ccgtccgggt cagcagcaag caaaaggcgg cgacggacgt 240
caggcggcgt cccgg 255

<210> 532
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 532

ctcttttgac gacatggttg agatgggcaa agatgctggc catgagctga aggcaaaggc 60
tgggcctggc ttctttgata gcttgcaatg aaaagaatga gcgaccatga gcaatttcaa 120
ttgtcaactct ttggttaga aacagagggc ccaagtagag tgtggagagg ttgttttttg 180

tttcttcttt ctcttgctaa ttctgctaga gaaggggtgta cctgggtgtag tggtagagccg 240
agtcacacagg tcgcgggttc gaagcatcca gtctccgtat 280

<210> 533
<211> 325
<212> nucleic acid
<213> Zea mays

<400> 533
aaacacgcgt ccgcggacgc tggggacacg gttaaggaaa ctcaaggaag gagatgtgtc 60
tgctacattg taggcgcagg ctgagattaa ggcggctaaa tatggcagaa aatgcaacag 120
ctgtactatc agtgaagaa atgcttcagg cagttgcccc aggtgctatt ggaatcgctt 180
gccgaagcaa cgatgacaaa atgatggagt atctgtcctc gttgaaccac gaggatacca 240
gactagctgt cacatgcgaa agagaattct tggcagttct tgatggcaac tgccgaactc 300
caattgcggc ctatgcttac cgtga 325

<210> 534
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 534
tgcattcata tgcttgactg caaattctct cgcgagactt cctgctggca gtgttggtgg 60
aagtgttcc ttgcctagac aatctcacat tctctacaga tatccatcac tgaaagtagt 120
taacttcaga ggaaatgttc agacacggtt aaggaaaactc actgaaggag atgtgtctgc 180
tacattgttg gcgctggctg gattaaggca gctaaatatt gcagaaaatg caacagctgt 240
actatcagtg gaagaaatgc ttccggcagt tgcccaagtg ct 282

<210> 535
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 535
caggactgct cattccgggg cctactggct tcaccagacg gatctaaagt atttgagacg 60
gcaagaagtg gaccgtactc ttctgacgac atggctcgaga tgggcaaaga cgctggccac 120

tccatcactg aaagtagtta acttcagagg aaatgttcag acacggttaa agaaactcaa 240
 ggaaagagat gtgtctgcta cattgttggc gctggctgga ttaaagcggc taaaaatggc 300
 agaaaatgca acagctgtac tatcagtgga agaaatgc 338

<210> 539
 <211> 422
 <212> nucleic acid
 <213> Zea mays

<400> 539

ccaaggtctc actcatccgg attgggacgc gtgggagtcc tctggctctt gcacaagccg 60
 atgaaactcg ggaaaaactg aaagccgcac actctgagtt agctgaggag ggggctattg 120
 agatcgatcat cataaagacc acaggagaca tgatcttggg caaaccctt gcagatattg 180
 gaggcaaggg tttattcacc aaggagatag atgatgcact cttgcaggga aggattgata 240
 tagctgtgca ctctatgaaa gatgttccaa catatctacc tgaaggcaca atattgccct 300
 gtaacctccc acgagaagat gtaagagatg cattcatatg cttgactgca aattcgctcg 360
 cggagcttcc tgctggcagt gttgttgga gtgcttcctt gcggagacaa tctcagattc 420
 tc 422

<210> 540
 <211> 280
 <212> nucleic acid
 <213> Zea mays

<400> 540

ctctggctct tgcacaagcc catgaaactc gggaaaaact gaaagccgca cactctgagt 60
 tagctgagga gggggctatt gagatcgta tcataaagac cacaggagac atgatcttgg 120
 acaaaccctt tgcagatatt ggaggcaagg gtttattcac caaggagata gatgatgcac 180
 tcttgcaggg aaggattgat atagctgtgc actctatgaa agatgttcca acatatctac 240
 ctgaaggcac aatattgccc tgtaacctcc cacgagaaga 280

<210> 541
 <211> 255
 <212> nucleic acid
 <213> Zea mays

<220>
<221>
<222>
<223>

unsure
(178)

<400> 541

gggtttattc accaaggaga tagatgatgc actcttgacg ggaaggattg atatactgt 60
gcactctatg aaagatgttc caacatatct acctgaaggc acaatattgc cctgtaacct 120
cccacgagaa gatgtaagag atgcattcat atgcttgact gcaaattogc tcgcggantt 180
cctgctggca gtgttggttg aagtgcctcc ttgcgagac aatctcagat tctctacaga 240
tatccatcac tgaaa 255

<210> 542
<211> 269
<212> nucleic acid
<213> Zea mays

<400> 542

gcactcttgc aggggaaggaa tgatatagct gagcactcta tgaaagatgt tccaacataa 60
ctacctgaag gcacaatatt gccctgtaac ctcccacgag aagatgtaag agatgcattc 120
atatgcttga ctgcaaattc gctcgcgag cttcctgctg gcagtgttgt tggaagtgc 180
tccttgcgga gacaatctca gattctctac agatatccat cactgaaagt agttaacttc 240
agaggaaatg ttcagacacg gttaaggaa 269

<210> 543
<211> 334
<212> nucleic acid
<213> Zea mays

<400> 543

agagccacgc gtccgccac gcgtccgcct tgtcaaagcc ggcaatggtg ttgccaccct 60
tggcctccct gactccctg gttcccca cggggccaag taccacactt tgacggcacc 120
ctacaatgat gtgcaccgca gtgatcaaac tgttogaaga caaaccctg gagattgcgg 180
gcgtcctcct cgaaccagtt gttggcaacg ctggtttcat ccctccagag acatggtttc 240
cttaacgctc tccgcgactt gaccaggcag gatggtgcgc tccagggcgt cgatgaactg 300
atgaccggct tccgtctgtc ttacgggtgga cctc 334

<210> 544
 <211> 429
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (316)
 <223>

<400> 544

cccacgcgtt cggcgggaac cctctagcca tgaccgctgg gatccacacg ctcaagcggc 60
 tgacagagcc cggcacctac gactacttgg acaagatcac cggcgaactc gtccgtggga 120
 tactggacgt cgggtgcgaaa gcagggcatg atatgtgcgg aggacatata agaggaatgt 180
 ttggcttctt ctccaccggc gggcccgtcc acaacttcgg ggacgccaaag aagagcgaca 240
 ccgagaagtt cgggaggttc taccgtggca tgctggagga gggcgtgtac ttcgctccat 300
 cgcagttcga ggcggngttc accagcttgg cgcacacctt ccaggacatc gagaagaccg 360
 tcgaggccgc tgagaaggtt ctgaagcgga tatagggggg ccgcttcaag caagcatgca 420
 gagagcatt 429

<210> 545
 <211> 403
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (360)
 <223>

<400> 545

aatgggatcc acacgtcaa gcggctgaca gagcccggca cctacgagta cttggacaag 60
 atcaccggcg aactcgtccg tgggatactg gacgtcgggt cgaaagcagg gcatgagatg 120
 tgccgaggac atatcagagg aatgtttggc ttcttcttca ccggcggggc cgtccacaac 180
 ttcgggggac ccaagaagag cgacaccgag aagttcggga ggttctaccg tggcatgctg 240
 gaggagggcg tgtacttcgc tccctcgcag ttcgaggcgg ggttcaccag cttggcgcac 300
 acctcccagg acatcgagaa gaccgtcgag gccgctgaga aggttctgaa gcggatatan 360

ggggtccgct tcaagcaagc atgcagagag catttcctcg tat 403

<210> 546
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 546

agaaactgtt cgaggacaac gcgggggaga ttgctgccgt ctctctcgag ccagttgttg 60
gcaacgctgg ttatcatccc ccacagcctg gtttccttaa cgctctccgc gacttgacca 120
aacaggatgg tgcgctcctg gtcttcgatg aagtgatgac cggcttccgt ctgtcttacg 180
gtggagctca ggagtacttc gggatcacc ctgacgtgac gaccttgggc aagatcatcg 240
ggggtggcct ccccgttggg gcctacggtg ggagaaggga catcatggag atggttgccc 300
ccgaaggccg at 312

<210> 547
<211> 286
<212> nucleic acid
<213> Zea mays

<400> 547

ggttgcccc gcaggccgat gtaccaggca ggaactctca gcgggaaccc tctagccatg 60
accgctggga tccacacgct caagcggctg acagagcccg gcacctacga gtacttggac 120
aagatcaccg gcgaactcgt ccgtgggata ctggacgtcg gtgcgaaagc agggcatgag 180
atgtgcggag gacatatcag aggaatgttt ggcttcttct tcaccggcgg gcccgccac 240
aacttcgggg acgccaagaa gagcgacacc gagaagtctg ggaggt 286

<210> 548
<211> 285
<212> nucleic acid
<213> Zea mays

<400> 548

cctgacgtga cgaccttggg caagatcatc ggggggtggc tcccgttg tgcctacggt 60
gggagaaggg acatcatgga gatggttgcc cccgcaggcc gatgtaccag gcaggaactc 120
tcagcgggaa ccctctagcc atgaccgctg ggatccacac gctcaagcgg ctgacagagc 180

ccggcaccta cgagtacttg gacaagatca ccggcgaact cgtccgtggg atactggacg 240
tcggtgcgaa agcagggcat gagatgtgcg gaggacatat cagag 285

<210> 549
<211> 243
<212> nucleic acid
<213> Zea mays

<400> 549

gaccggcttc cgtctgtctt acggtggagc tcaggagtac ttcgggatca cccctgacgt 60
gacgaccttg ggcaagatca tcgggggttg cctccccgtt ggtgcctacg gtgggagaag 120
ggacatcatg gagatggttg cccccgcagc cgatgtacca ggcaggaact ctacgaggga 180
accctctagc catgaccgct gggatccaca cgctcaagcg gctgacagag cccggcacct 240
acg 243

<210> 550
<211> 247
<212> nucleic acid
<213> Zea mays

<400> 550

gtttccttaa cgctctccgc gacttgacca aacaggatgg tgcgctcctg gtcttcgatg 60
aagtgatgac cggcttccgt ctgtcttacg gtggagctca ggagtacttc gggatcaccc 120
ctgacgtgac gaccttgggc aagatcatcg ggggtggcct ccccgttggt gcctacggtg 180
ggagaaggga catcatggag atggttgccc ccgcaggccg atgtaccagg caggaaactct 240
cagcggg 247

<210> 551
<211> 223
<212> nucleic acid
<213> Zea mays

<400> 551

gcacgaggca gggccgatgt accaggcagg aactctcagc gggaaccctc tagccatgac 60
cgctgggatc cacacgtca agcggctgac agagcccggc acctacgagt acttgacaa 120
gatcaccggc gaactcgtcc gtgggatact ggacgtcggg gcgaaacagg gcatgagatg 180

tgcggaggac atatcagagg aatgtttggc ttctttctca ccg 223

<210> 552
<211> 218
<212> nucleic acid
<213> Zea mays

<400> 552

gcacgaggca gggccgatgt accaggcagg aactctcagc gggaaccctc tagccatgac 60
cgctgggatac cacacgctca agcggctgac agagcccggc acctacgagt acttgacaa 120
gatcacccgc gaactcgtcc gtgggatact ggacgtcggg gcgaaagcag ggcattgagat 180
gtgaggagga catatcagag gaattgttgg cttcttct 218

<210> 553
<211> 275
<212> nucleic acid
<213> Zea mays

<400> 553

gcgaaacagg gcatgagatg tgcggaggac atatcagagg aatgtttggc ttctacttca 60
ccggcgggcc cgtccacaac ttcggggacg ccaagaagag cgacaccgag aagttacaga 120
ggttctaccg tggcatgctg gaagaggcgt gtacttcgct ccctcgcagt tcgaggcggg 180
gttcaccagc ttggcgcaca cctcccagga catcgagaag accgtcgagg ccgtaatgaa 240
ggttctgaag cgatatagg gggtagcgtt caagc 275

<210> 554
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 554

cttcggggac gccaaaga ggcacaccga gaagttcggg aggttctacc gtggcatgct 60
ggaggagggc gtgtacttcg ctccctcgca gttcgaggcg gggttcacca gcttggcgca 120
cacctcccag gacatcgaga agaccgtcga ggccgctgag aaggttctga agcggatata 180
gggggtccgc ttcaagcaag catgcagaga gcatttcctc gtatctacgt tcttgactc 240
ttagttctat at 252

<210> 555
 <211> 295
 <212> nucleic acid
 <213> Zea mays

<400> 555

ctctagccat gaccgctggg atccacacgc tcaagcggct gacagagccc ggcacctacg 60
 agtacttgga caagatcacc ggcgaactcg tccgtgggat actggacgtc ggtgcgaaag 120
 cagggcatga gatgtgcgga ggacatatca gaggaatggt tggcttcttc ttcaccggcg 180
 ggcccggtcca caacttcggg gacgccaaga agagcgacac cgagaagttc gggaggttct 240
 acgtggcatg cctggagagg gcgtgtactt cggctccctc gcagttcgag gcggg 295

<210> 556
 <211> 331
 <212> nucleic acid
 <213> Zea mays

<400> 556

ccacgcgtcc gagggcgtgt acttcgctcc ctgcagttc gaggcgggggt tcaccagctt 60
 ggcgcacacc tcccaggaca tcgagaagac cgtcgaggca gctgagaagg ttctgaagcg 120
 gatatagggg gtccgcttca agcaagcatg cagagagcat ttcctcgtat ctacgttctt 180
 gtactcttag ttctatatgc caccgaggtt ttgtattgtg cagcagcagg acagcttctg 240
 taagttcctc tttctgaatt agtgggtctt gtttttgtca gtgccaataa atctctggtc 300
 cacgattacg gtttcgttgt tgtactgatg t 331

<210> 557
 <211> 423
 <212> nucleic acid
 <213> Zea mays

<400> 557

gacccaatcg ccgcaaacc ctcggaatt tcttatcccc cctcatctgc tccacctccg 60
 acctcgcgcg agacgagcaa gcccaagtat ggccggagca gcagcagccg ccgtggcgct 120
 cggggctctcg gcccgccgg ccgcgccgag gagggcttct gcgggacgcc gcgctcggct 180
 gtcggtggtg cgggccgcga tatccctcga gaagggcgag aaggcgtaca cggcgagaa 240

gtccgaggag atcttcaacg ccgccaagga gctgatgcct ggaggtgtta actcgccagt 300
 ccgagccttc aaatctgttg gtgggcagcc agtagttttc gactctgtaa agggttctcg 360
 tatgtgggat gttgatggga atgagtacat tgattacgtt ggttcctggg gtcctgcaat 420
 cat 423

<210> 558
 <211> 302
 <212> nucleic acid
 <213> Zea mays

<400> 558

cggacgcgtg ggcggacgcg tgggcgccga ggagggcttc tgcgggacgc cgcgctcggc 60
 tgtcgggtgtt gcgggcccgcg atatccctcg agaagggcga gatagcgtae acggtgcagc 120
 agtccgagga gatcttcaac gccgccaatg agctgatgcc tggaggtgtt aactcgccag 180
 tccgagcctt caaatctgtt ggtgggcagc cagtagtttt cgactctgta aagggttctc 240
 gtatgtggga tgttgatggg aatgagtaca ttgattacgt tggttcctgg ggtcctgcaa 300
 tc 302

<210> 559
 <211> 305
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (168)
 <223>

<400> 559

ctgctccacc tccgacctcg cgcgagacga gcaagcccaa gtatggccgg agcagcagca 60
 gccgccgtgg cgtccggagt ctcggcccgg ccggccgcgc cgaggagggc ttctgcggga 120
 cgccgcgctc ggctgtcggg ggtgcggggc gcgatatacc tcgagaangg cgagaaggcg 180
 tacacgggtgc agaagtccga ggagatcttc aaggccgccca aggagctgat gcctggaggt 240
 gttaactcgc cagtccgagg cttcaaactc gttgggtgggc agccagtagt ttcgactctg 300
 taaag 305

<210> 560
 <211> 276
 <212> nucleic acid
 <213> Zea mays

<400> 560

gctccacctc cgacctcgcg cgagacgagc aagcccaagt atggccggag cagcagcagc 60
 cgccgtggcg tccgggggtct cggcccggcc ggccgcgccg aggagggctt ctgcgggacg 120
 ccgcgctcgg ctgtcgggtgg tgcggggccgc gatatccctc gagaagggcg agaaggcgta 180
 cacgggtgcag aagtccgagg agatcttcaa cgccgccaag gagctgatgc ctggagggtg 240
 taactcgcca gtccgagcct tcaaattctgt tgggtgg 276

<210> 561
 <211> 225
 <212> nucleic acid
 <213> Zea mays

<400> 561

cccacgcgtc cgcccacgcg tccgcccacg cgtccgctgc gggaccgcg ctcggtgtc 60
 ggtggtgcgg gccgcgatat ccctcgagaa gggcgagaag gcgtacacgg tgcagaagtc 120
 cgaggagatc ttcaacgccg ccaaggagct gatgcctgga ggtgttaact cgccagtccg 180
 agccttcaaa tctgtatgtg ggcagccagt agttttcgac tctgt 225

<210> 562
 <211> 276
 <212> nucleic acid
 <213> Zea mays

<400> 562

cagacgcgtg ggcgagacgc gtgggctgct ccacctccga cctcgcgcgga gacgagcaag 60
 cccaagtatg gccggagcag cagcagccgc cgtggcgctc ggggtctaca cccggccgga 120
 cgcgcccagg agggcttctg cgggacgccg cgctcggctg tcggtggtgc gggccgcgat 180
 atccctcgag aagggcgaga aggcgtacac ggtgcagaag tccgaggaga tcttcaacgc 240
 cgccaaggag ctgatgcctg gaggtgttaa ctcgcc 276

<210> 563

<211> 251
 <212> nucleic acid
 <213> Zea mays

<400> 563

ccacgcgtcc gtccacctcc gacctcgcg gagacgagca agcccaagta tggccggagc 60
 agcagcagcc gccgtggcgt cgggggtctc ggcccggccg gccgcgccga ggagggcttc 120
 tgcgggacgc cgcgctcggc tgtcggtggt gcggggccgcg atatccctcg agaagggcga 180
 gaaggcgtag acggtgcaga agtccgagga gatcttcaac gccgccaagg agctgatgcc 240
 tggaggtggt a 251

<210> 564
 <211> 337
 <212> nucleic acid
 <213> Zea mays

<400> 564

caagtatcga aatgggtccgc tttgtcaact caggacaga agcctgcatg ggagcgctcc 60
 gcctcgtgcg cgcattcacc gggcgggaga agatcatcaa gttcgaaggc tgctaccatg 120
 gccatgccga ttcttctctt gtcaaagccg gcagtgggtg tgcaccctt ggcatcactg 180
 actcccttgg cgtccccaag ggggccacct acgagacttt gacggcaccc tacaatgatg 240
 tcgcggcagt gaagaaactg ttcgacgaca acgcggggga gattgctgcc gtcttcctcg 300
 agtcagttgt tggcaacgct ggtttcaatc cccaca 337

<210> 565
 <211> 263
 <212> nucleic acid
 <213> Zea mays

<400> 565

gaaactctga agaaaggaac tagctttggt gtcctatggt tgctggagaa cgtattggct 60
 gagatgggtca tctctgccgt gccaagtatc gaaatggtec gctttgtcaa ctgagggaca 120
 gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca ccggggcgga gaagatcatc 180
 aagttcgaag gctgctacca tggccatgcc gattccttcc ttgtcaaagc cggcagtggt 240
 gttgccaccc ttggcctccc tga 263

<210> 566
 <211> 310
 <212> nucleic acid
 <213> Zea mays

<400> 566

gaacaccacg aatcgtctgc attcggctcg aggacactct gaagaaagga actagctttg 60
 gtgctccatg tttgctggag aacgtattgg ctgagatggg catctctgcc gtgccaagta 120
 tcgaaatggg ccgctttgtc aactcaggga cagaagcctg catgggagcg ctccgcctcg 180
 tgcgcgcatt caccgggagg gagaagatca tcaagttcga aggctgctac catggccatg 240
 ccgattcctt ccttgtcaaa gccggcagtg gtgttgccac ccttggcctc cctgactccc 300
 ctggcgctccc 310

<210> 567
 <211> 124
 <212> nucleic acid
 <213> Zea mays

<400> 567

gctttgtcaa ctcagggaca gaagcctgca tgggagcgct ccgcctcgtg cgcgcattca 60
 ccgggaggga gaagatcatc aagttcgaag gctgctacca tggccatggc gaatccttcc 120
 ttgt 124

<210> 568
 <211> 295
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (126)
 <223>

<400> 568

cggacgcgtg gcgagacgag tgggaggacg cgtgggcctt gtcaaagccg gcagtgggtg 60
 tgccaccctt ggctccctg actcccctgg cgtccacacac ggggccacca cctgagactt 120
 tgacangaac cctacaatga tgtcgaggca gtgaagaaac tgttcgagga caacgcgggg 180
 gagattgctg ccgtcttctt cgagccagtt gttggcaacg ctggtttcat cccccacag 240

cctggtttcc ttaacgctct ccgcgacttg accaaacagg atggtgcgct cctgg 295

<210> 569
<211> 253
<212> nucleic acid
<213> Zea mays

<400> 569

cccacgcgtc cgcccacgcg tccgctcccc tggcgtcccc aagggggcca cctacgagac 60
tttgacggca ccctacaatg atgtcgcggc agtgaagaaa ctgttcgagg acaacgcggg 120
ggagattgct gccgtcttcc tcgagccagt tgttggaac gctggtttca tccccccaca 180
gcctggtttc cttaacgctc tccgcgactt gaccaaacag gatggtgcg ccttggtctt 240
cgatgaagtg atg 253

<210> 570
<211> 363
<212> nucleic acid
<213> Zea mays

<400> 570

ggtgcacggt agtgagtcgg aatcggctcg agtggcgatg gaaatctggg agctactgaa 60
agaattcttt gatgcagaaa ttagaaagct gaagctacaa ccatattatt tcgctattgt 120
tgttactgag aatgttctac agaaggaaaa ggaccacatt gagggctttg cacctgaggt 180
agcttggggtt actaaatctg ggaaatctga cctggaagca ccgattgcaa gtgcgcccac 240
aggtgagctt gtaatgaacc cggctttctc catatggata agacgccacc gagacttacc 300
cttgaggtgt aatcaatggt gtcattgttg tagatgggag tttagcgatc cgactccttt 360
cat 363

<210> 571
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 571

accacgcgtc cgcccacgcg tccgagaagc aggaattaga gttaaagtgg acgactcaga 60
gctgcgaact cctggatgga aattcaatca ctatgagatg aaaggggttc ctgtaagaat 120

atagataggt ccacgtgatg tcacaaataa gagtgttggtg gtttctaggc gtgatgtccc 180
 tggaaagcaa ggaaaggagt ttggagtgtc tatggagcct tcgatattgg tgaaccatat 240
 aaatggtcgt ctagatgaca tacaagcatg ccttttacag aaggccttaa aatccgtgat 300
 agtaacattg tc 312

<210> 572
 <211> 270
 <212> nucleic acid
 <213> Zea mays
 <220>
 <221> unsure
 <222> (11)...(12)
 <223> unsure at all n locations

<400> 572
 ttaacttgca nngccagggtc aaggtctaga attcccaggc cgacctacga ctacacgtcg 60
 gccacccgt ccggccaaga tggctcctga gggctaagaa aagctgtaca ccaagggtcaa 120
 gagcattcac gacagcctga tcgaggctgg tgtccgcgtc gagtccgact accgtgaggg 180
 ctactcccc ggatggaagt tcaacgactg ggagctcaag ggtaatcctc ttcctaacca 240
 attccgtccc aaggattccc aaaaaggttt 270

<210> 573
 <211> 427
 <212> nucleic acid
 <213> Zea mays

<400> 573
 cccacgcgtc cgcccacgcg tccgcccacg cgtccgcca cgcgtccgtg ggaaaatgtg 60
 gccagatgct tctgatactg atgcttcctc tcactataag cttccgttct caagaactgt 120
 ctacattgag aaaactgatt ttcgccttaa ggactcaaaa gactactatg ggctggcccc 180
 tggtaaattct gtcattgctaa ggtatgcgtt ccccataaaa tgcacagacg ttatctatgg 240
 tgatactcct gatgatattg ttgaaattcg agcagaatat gatcctttga agacttctaa 300
 acttaagggt gttctgcact gggttgctga gccagcacct ggtgtcgaac cattgaagggt 360
 ggaagtaaga ctattcgaga aattgttcat gtcagagaat cctgctgaat tggaggattg 420

gcttggt 427

<210> 574
<211> 273
<212> nucleic acid
<213> Zea mays

<400> 574

gttgaggaga gtggaaattt atgaattcag ccgattgaat atggttttaca ctcttctaag 60
caagcgaaag cttcttttgggt ttgtacaaaa caagaagggtc gaagattgga cagacccacg 120
ttttcccact gtccaaggca tagtacgtcg gggcttgaag gttgatgcat tgatacagtt 180
tatactccaa caggggtgctt caaaaaatct gaatctcatg gaatgggata aactctggac 240
aatcaacaag aagataattg atccagtgtg cgc 273

<210> 575
<211> 267
<212> nucleic acid
<213> Zea mays

<400> 575

cccacgcgtc cggacggtat tgagtcaagg tgcagaaata ataccgtgga ggaaaatctc 60
tcattatgga aagagatgggt taatggaact gaaaggggca tgcagtgtctg tgtacgggggt 120
aaacttgaca tgcaggatcc taacaagtca ctcagggatc ctgtttacta ccgctgtaat 180
actgatccac accatcgtgt tggttcgaag tacaagggtct atccaacata tgactttgcg 240
tgcccatttg tcgatgcatt ggagggg 267

<210> 576
<211> 380
<212> nucleic acid
<213> Zea mays

<400> 576

cggacgcgtg ggctgctgaa ttggaagatt ggcttggcga tcttaacca cactcgaaaag 60
aggtgataaa ggatgcttat gctgtaccat cacttgccac tgcggttctg ggtgacaagt 120
tccagtttga gcggcttgggt tacttcgccg tggatactga ctccacacct gagaaaactcg 180
tgttcaacag aactgttacc ctccgtgatt cgttcgggaa agctggaccc aagtgactgt 240

tcagtgtaat ttagggaggg cgctggtttt gatcggttgc agaagcgcac ctgaactata 300
 caagttgtga agaaaatggt cgtctaatac agaacagttt aaagggcctt actctttata 360
 aaatttaggg ttttttaaaa 380

<210> 577
 <211> 373
 <212> nucleic acid
 <213> Zea mays

<400> 577

actgtttaca cactcaatca atctgggatt tgagcggatc aggacacccg tgaaaattag 60
 ctctccaggt tggaagtatt ctactggga aatgaaaggt gttccattga gaattgagat 120
 tgggtccaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 180
 ggttgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattca 240
 aaaaaatctg ttcaaaacag ctcaagaaag gagagatgca tgtgttcagg tcgtcaactc 300
 ttgggatgaa ttcacaactg ctctgaataa caaaagggtg atcttggtc cttggtgcga 360
 tgaggaggaa gtt 373

<210> 578
 <211> 299
 <212> nucleic acid
 <213> Zea mays

<400> 578

cgtgattcca gtgccttata aggacgctga cacaactgcc ataaaggag cctgcgaatc 60
 aactgtttac aactcaatc aatctgggat tcgagcggat caggacaccc gtgaaaatta 120
 ctctccaggt tggaagtatt ctactggga aatgaaaggt gttccattga gaattgagat 180
 tgggtccaaaa gatctggcaa acaaacaggt acgcattgtc cgccgggaca acggtgcaaa 240
 ggttgacatt ccggtgacca atttggttga agatgttaaa gtgttattgg atgagattc 299

<210> 579
 <211> 286
 <212> nucleic acid
 <213> Zea mays

<400> 579

gccaatccag gtaattgtga ttccagtgcc ttataaggat gctgacacaa ctgccataaa 60
 gggagcctgc gaatcaactg ttacacact cgatcaatct ggaattagag cggatcagga 120
 caccctgtgaa aattactctc cagggttgaa gtattccac tgggaaatga aagggtgttc 180
 attgagaatt gagattggtc caaaagatct ggcaaacaaa cagggtgcgtg ttgtccgccg 240
 ggacaacggt gcaaagggtg acatccctgt gaccaatttg gttgaa 286

<210> 580
 <211> 313
 <212> nucleic acid
 <213> Zea mays

<400> 580

gatgacaaaag gcttagtatt accaccaaag gtagcgccaa tccaggtaat tgtgattcca 60
 gtgccttata aggatgctga cacaactgcc ataaaggag cctgcgaatc aactgtttac 120
 aactcgatc aatctggaat tagagcggat caggacaccc gtgaaaatta ctctccaggt 180
 tggaagtatt cccactggga aatgaaagggt gttccattga gaattgagat tgggtccaaaa 240
 gatctggcaa acaaacaggt gcgtgttgtc cgccgggaca acggtgcaaa ggttgacatc 300
 cctgtgacca att 313

<210> 581
 <211> 307
 <212> nucleic acid
 <213> Zea mays

<400> 581

cccacgcgtc cgcacatggt gatgacaaaag gcttagtatt accaccaaag gtagcgccaa 60
 tccaggtaat tgtgattcca gtgccttata aggatgctga cacaactgcc ataaaggag 120
 cctgcgaatc aactgtttac aactcgatc aatctggaat tagagcggat caggacaccc 180
 gtgaaaatta ctctccaggt tggaagtatt cccactggga aatgaaagggt gttccattga 240
 gaattgagat tgggtccaaaa gatctggcaa acaaacaggt gcgtgttgtc cgccgggaca 300
 acggtgc 307

<210> 582
 <211> 227
 <212> nucleic acid

<213> Zea mays
 <400> 582
 cccacgcgtc cggaaggtg ttccattgag aattgagatt ggtccaaaag atctggcaaa 60
 caaacaggtg cgtgttggtc gccgggacaa cgggtgcaaag gttgacatcc ctgtgaccaa 120
 tttgggttgaa gaggttaaag tgttactgga tgagattcaa aaaaatctgt tcaaacagc 180
 ccaagaaaag agagatgcct gtgttcatgt cgtgaacact tgggatg 227

<210> 583
 <211> 427
 <212> nucleic acid
 <213> Zea mays

<400> 583
 gggtgacaat attacatgtg caccgaccac aaaccaaata atcagcaaaa tggatttcga 60
 gtggcatctc aacatgcaca accttaggta aaagcttgag atggagaaac taaaagtttc 120
 caacagcgaa cacaaagagt ggctggggct ggctaggag gggaggaaga agagtgccat 180
 cacacgaaaa ccatgacctc acagcattgg tgcagtaaca ttctactatt tagagcctat 240
 gatcaggctt taaagagtgg ctggggctgg cctaggaggg gaggaagaag agtgccatca 300
 ctaacaaaac agcccctcga accatgggtg ttttgcgacc tctaaagggtg gtaataacta 360
 acttggaaga aggaaaagta ctagaccttg atggcaaat gtggcctgat gcttctgata 420
 ctgatgc 427

<210> 584
 <211> 499
 <212> nucleic acid
 <213> Zea mays

<400> 584
 tgggtagtgt aacatcacaa tgctactgcc aactcatata ctaggactcg ttggtcgtta 60
 caaactcta gattcactcg tattaaccga atctgtgagc catgtcgacc aacaagggca 120
 gcgcggccaa gggcggcgga gggaagaaga aggaggtgaa gaaggagacg aagctcgga 180
 tggcctataa gaaggacgac aacttcgggg agtggtactc cgaggttggt gttaacagtg 240
 aaatgattga gtactatgac atttctgggt gttatatatt gaggccatgg gcgatggaaa 300

tctgggagct actgaaagaa ttctttgatg cagaaattaa aaagctgaag ctcaaaccat 360
attatttccc tttgtttggt actgagaatg ttctacagaa ggaaaaggac cacattgagg 420
gctttgcacc tgaggtagct tgggttacta aatctgggaa atctgacctg gaagcaccga 480
ttgcaatccg cccacaag 499

<210> 585
<211> 284
<212> nucleic acid
<213> Zea mays

<400> 585

gacatttctg gttgttatat attgaggcca tgggcgatgg aaatctggga gctactgaaa 60
gaattctttg atgcagaaat taaaaagctg aagctcaaac catattatatt ccctttgttt 120
gttactgaga atgttctaca gaaggaaaag gaccacattg agggctttgc acctgaggta 180
gcttgggtta ctaaactctgg gaaatctgac ctggaagcac cgattgcaat ccgccccaca 240
agtgagactg tcatgtatcc gtacttctcc aaatggataa gaag 284

<210> 586
<211> 271
<212> nucleic acid
<213> Zea mays

<400> 586

ggaccgtggc ggtacgcgtg ggtttgtcga catatctgtc ccaaggaatg tcagcgcgtg 60
cgtctctgaa attggctccg agcgagtata caatgtcgac gacctgaaag aggtggtgga 120
agccaacaag gaagaccgtc tcaggaaagc gatggaggca cagacaatca tcgccgaaga 180
gctgaaacgg tttgaggcgt ggcgggactc gctggagacc gttccaacca tcaagaagct 240
gaggtcttac gccgacagga tccgggcctc g 271

<210> 587
<211> 230
<212> nucleic acid
<213> Zea mays

<400> 587

accatattga agaggctgct gtgcttagac ctgtaacaga atggaaattt atgtggtggc 60

cctatcatgg aaccgaggta tcagggaaagt cgtggactgg atgtcgaaga aaagtgggtat 120
 tcttgcttct gagcttaggg aacacctatt catgctgcgt gacagtgatg ctacacgcca 180
 tctgtttgag gtatcggctg ggttggaactc tctggttctc ggtgaaggac 230

<210> 588
 <211> 229
 <212> nucleic acid
 <213> Zea mays

<400> 588

gtggccccgt gctattcaag aactcactag cctgaaccat attgaagagg ctgctgttct 60
 tagtacctgt aatagaatgg aaatttatgt ggtggcgcta tcatggaacc gtggtatcag 120
 agaagtagtg gactggatgt cgaagaaaag tggattcccc gcttccgagc ttagggagca 180
 cctgttcatc ttgcgaacag tgatgccaca cgccatctgt ttgaggtgt 229

<210> 589
 <211> 492
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (11), (46), (49)... (56), (59), (442)
 <223> unsure at all n locations

<400> 589

aggttaaaagt ntgtaataga tgggatgtac tgtacacttc tccgnttnn nnnnnngng 60
 gggagccacg cgtccggaaa tgtaacgca ttaaaaggta tacggtatca gtaaacctta 120
 caagtgtgat gccaaaggaa aacggcatca gctgacacat tgctatatc ctgtttattt 180
 cgtccgaata aagtatataa ctaagaaaag gggctcttgc cccacagcag ctcaagcaaa 240
 aatgtacaaa gaaaagcagc tcgagtagag agaatttgcc actctctcga cagattgagc 300
 tgctgccatg gcgctaattc acgacacatt tgatgtctcg gcaagacggg gaggagctca 360
 gtaagtgaga tgataaaaaa atagaatcag gttggagggt aagtatacac gggtagaaaa 420
 attgcctcct tggccttaat tntgggtctt ctccaccttg gccttgatct tctgctcgat 480
 gattgccttc tc 492

<210> 590
 <211> 313
 <212> nucleic acid
 <213> Zea mays

<400> 590

cgtggaaaac tttccggttc caaaggacct ttggccctt ccttttaaga acctacctgg 60
 gtaaaccctt tttgaaaagg ctccgtgcct aatacttgta taaaatgaaa attatgtggt 120
 agccctatca tggaaccgaa gtatcagaga agtagttgac tggatgtcaa agaaaagtgg 180
 tattctgtct tctgagctta aggagcacct attcatgctg cgtgacagtg atgctacacg 240
 ccatctgttc taagtatcag caagggttga ctctttggtt ctcggtgaac gacaaatcct 300
 tgctcaagtc aaa 313

<210> 591
 <211> 457
 <212> nucleic acid
 <213> Zea mays

<400> 591

agcccacgcg tccgcccacg cgtccggtga aatcccgcac ctacctcctt cctctctcac 60
 cgaggaccct cgcaccaaga actgagcggg aagagaggta gagaggcaag cgcacgagag 120
 tttctgctcc tagtctcgtc tcgcccgcgc tccgtctcct ttccctctct gggtctctct 180
 ctgcgattct cgtcgcattg gttccgttcc ctcacgaaag gcggtagctt tctgtcttcc 240
 ctgatctatc tagataatgg cgaccacgac gtcagcgacc accgccgcag cagcagccgc 300
 caccatcgcc aagccgcggg ggtcgtcgtc ggacctctgc cagagggtgg ccggcggcgg 360
 caggcgggtgc tccgggggtg tgccgtgcga cgccgccggc gtggaggccc aggcgcattgc 420
 cgtggcaaatt gcggccagcg tcgccgccct cgagcag 457

<210> 592
 <211> 267
 <212> nucleic acid
 <213> Zea mays

<400> 592

gaaggttggt gtggtgaacc gctccgtgga aagggtggat gctattcgtg aggagatgaa 60
 agatatagag atcgtgtaca ggcctctctc agacatgtat caagctgctg ctgaagctga 120

tgtcgtgttc accagcacgc catctgaaac ttcattgttc gcaaaagaac acgcagaggc 180
actccccct gtctctgata ctatgggagg tgttcgctg tttgtcgaca tatctgtccc 240
caggaatgtc agcgcatgtg tgtctga 267

<210> 593
<211> 264
<212> nucleic acid
<213> Zea mays

<400> 593
cccacgcgtc cgcccacgcg tccgggatgc aagaagggtg ttgtggtgaa ccgctccgtg 60
gaaaggggtg atgctattcg tgaggagatg aaagatatag agatcgtgta caggcctctc 120
tcagacatgt atcaagctgc tgctgaagct gatgtcgtgt tcaccagcac cgcattctgaa 180
acttcattgt tcgcaaaaga acacgcagag gcactcccc ctgtctctga tactatggga 240
ggtgttcgcc tgtttgcga cata 264

<210> 594
<211> 310
<212> nucleic acid
<213> Zea mays

<400> 594
atcttattgc caaaggatgc aagaagggtg ttgtggtcaa ccgttcagt gaaaggggtg 60
atgccatccg cgaggagatg aaaggatcg agattgtgta caggcctctt tcagagatgt 120
acgaagctgc tgctgaagct gatgtcctat tcacgagcac tgcattctgaa acccattgt 180
tcacaaaaga gcacgcagag gcacttcca caatttccga tgccatggat ggtgcccggc 240
tttttgcga catatctgtc ccaaggaatg tcagcgcgtg cgtctctgaa attggctccg 300
cgcgagtata 310

<210> 595
<211> 290
<212> nucleic acid
<213> Zea mays

<400> 595
gtgggtcaacc gttcagcaca aagggtggat gccatccgcg aggagattaa agctatcgag 60

attgtgtaca ggctctctc ggagatgtat gaagctgctg ctgaagctga cgtcgtgttc 120
acgagcaccg catctgaaac cccattgttc acaaaagagc acgcagatgc acttcccact 180
gtttctgatg ccatgggagg tgtccggctc tttgtcgaca tatctgtccc aaggaatgtc 240
agcgcgtgtg tctctgaaat tggctccgag cgagtgtaca atgttgatga 290

<210> 596
<211> 168
<212> nucleic acid
<213> Zea mays

<400> 596

ggtggttgtg gtcaaccgtt cagtggaaag ggtggatgcc atccgcgagg agatgaaagg 60
tatcgagatt gtgtacaggc ctctttcaga gatgtacgaa gctgctgctg aagctgatgt 120
cctattcacg agcactgcat ctgaaacccc attgttcaca aaagagca 168

<210> 597
<211> 254
<212> nucleic acid
<213> Zea mays

<400> 597

acctgaaaga ggtggtggaa gccaaacaagg aagaccgtct caggaaagcg atggaggcac 60
agacaatcat cgccgaagag ctgaaacggt ttgaggcgtg gggggactcg ctggagaccg 120
ttccaacat caagaagctg aggtcttacg ccgacaggat ccgggcctcg gagctcgaga 180
agtgcctgca gaagatcggg gacgacgctc tcaccaagaa gacgaggaga gccatcgagg 240
agctaagcac cggc 254

<210> 598
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 598

cggctcgagg aaagaggtg tggaagccaa caaggaagac cgtctcagga aggcaatgga 60
ggcgcagaca atcatcaccg aagagctgaa acggtttgag gcatggcggg actcgtgga 120
gaccgttcca accatcaaga agctgaggtc atatgccgac aggatccgag cctcagagct 180

cgatgagtgc ctacagaaga tcggggatga cgttctcacc aagaagatga ggagagccat 240
cgaggagcta agcaccggca tcgtgaacaa 270

<210> 599
<211> 422
<212> nucleic acid
<213> Zea mays

<400> 599

cgaccatcaa gaagctgagg tcgtacgcgg acaggatcag ggcctcggag ctcgagaagt 60
gcctgcagaa agtaggtgag gacgccctca ccaagaagat gaggagagcc atcgaggagc 120
tgagcaccgg catcgttaac aagctcctcc atggcccgcg gcagcacctg aggtgcgacg 180
gcagcgacag ccgcaccctt gacgagacgc tcgagaacat gcacgccctc aaccggatgt 240
tcagcctcga catggagaag gcgatcatcg agcagaagat caaggccaag gtggagaaga 300
cacaaaactg aggccaggaa gcaatttttc taccaccatt atctatatat atagcgtctc 360
caatctcatt ccattttttt atcctttcac tcagttagcc cttccctgc tcactgtgat 420
cg 422

<210> 600
<211> 282
<212> nucleic acid
<213> Zea mays

<400> 600

gacaggatca gggcctcgga gctcgagaag tgcctgcaga aagtaggtga ggacgccctc 60
accaagaaga tgaggagagc catcgaggag ctgagcaccg gcatcgtaa caagctcctc 120
catggcccgc tgcagcacct gaggtgacgac ggcagcgaca gccgcaccct tgacgagacg 180
ctcgagaaca tgcacgctct caaccggatg ttcagcctcg acatggagaa ggcgatcatc 240
gagcagaaga tcaaggccaa ggtggagaag acacaaaact ga 282

<210> 601
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 601

tgacgttctc accaagaaga tgaggagagc catcgaggag ctaagcaccg gcatcgtgaa 60
 caagctcctc cacggcccg cgcagcacct gaggtgcgac ggtagtaaca gccgcaccct 120
 tgatgagacg ctcgagaaca tgcattgctct caaccggatg ttcagcctcg acacggagaa 180
 ggcgatcatc gagcagaaga tcaaggccaa ggtggagaag acccagaatt gaggcctgga 240
 gtcaatTTTT ctacccgtgt at 262

<210> 602
 <211> 288
 <212> nucleic acid
 <213> Zea mays

<400> 602

gacgccctca ccaagaagat gaggagagcc atcgaggagc tgagcaccgg catcgttaac 60
 aagctcctcc atggcccgt cgcagcacctg atgctggacg gcagcgacag ccgcaccctt 120
 gacgagacgc tcgagaacat gcacgccctc aaccggatgt tcagcctcga catggagaag 180
 gcgatcatcg agcagaagat caaggccaag gtggagaaga cacaaaactg aggccaggaa 240
 gcaatTTTT taccaccatt atctatatat atagcgtctc caatctca 288

<210> 603
 <211> 139
 <212> nucleic acid
 <213> Zea mays

<400> 603

cgatcatcga gcagaagatc aaggccaag tggagaagac acaaaaactga ggccaggaag 60
 caatTTTTt accaccatta tctatatata tagcgtctcc aatctcattc catTTTTtta 120
 tcctttcact cagtgagcc 139

<210> 604
 <211> 460
 <212> nucleic acid
 <213> Zea mays

<400> 604

cccacgcgtg cgccactcg tccggtggta ttcccgttg cgagcttagg gagcacctgg 60
 tcattttgag aagcagtgat gccacacgcc atctgtttga ggtgtcagct ggccttgact 120

ctttggttct cggatgaagga caaatccttg ctcagggttaa acaagttgtg aggagtggac 180
 agaacagtgg aggcttggga aagaacattg ataggatggt caaggatgca atcactgctg 240
 gaaagcgtgt ccgctgagag accaacaatat catctggtgc tgtttctgtc agttcagcgg 300
 cggttgaact ggcctgatg aagcttccga agtctgaagc actgtcagct aggatgcttc 360
 tgattggtgc tggtaaaatg ggaaagctag tgatcaaaca tctggttgcc aaaggatgca 420
 tgaaggttgt tgtggtgaac cgctccgtgg aaagggtgga 460

<210> 605
 <211> 322
 <212> nucleic acid
 <213> Zea mays

<400> 605
 aacaagttgt gaggagtgga cagaacagtg gaggcttggg aaagaacatc gataggatgt 60
 tcaaggatgc aatcactgct ggaaagcgtg tccgcagcga gaccaacata tcatctggtg 120
 ctgtttctgt cagttcagcg gcggttgaac tggccctgat gaagcttccg aagtctgaag 180
 cactgtcagc taggatgctt ctgattggtg ctggtaaaat gggaaagcta gtgatcaaac 240
 atctggttgc caaaggatgc aagaaggttg ttgtggtgaa ccgctccgtg gaaagggtgg 300
 atgctattcg tgaggagatg aa 322

<210> 606
 <211> 310
 <212> nucleic acid
 <213> Zea mays

<400> 606
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 tctgtttgag gtgtcagctg gccttgactc tttggttctc ggtgaaggac aaatccttgc 120
 tcagggttaaa caagttgtga ggagtggaca gaacagtgga ggcttgggaa agaacattga 180
 taggatgttc aaggatgcaa tcaactgctgg aaagcgtgtc cgctgagaga ccaacatatc 240
 atctggtgct gtttctgtca gttcagcggc ggttgaactg gccctgatga agcttccgaa 300
 gtctgaagca 310

<210> 607
 <211> 298
 <212> nucleic acid
 <213> Zea mays

<400> 607

gtgaaggaca aatccttgct caggttaaac aagttgtgag gagtggacag aacagtggag 60
 gcttgggaaa gaacatcgat aggatgttca aggatgcaat cactgctgga aagcgtgtcc 120
 gcagcgagac caacatatca tctggtgctg tttctgtcag ttcagcggcg gttgaactgg 180
 ccctgatgaa gcttccgaag tctgaagcac tgtcagctag gatgcttctg attggtgctg 240
 gtaaaatggg aaagctagtg atcaaacatc tggttgcaa aggatgcaag aaggttgt 298

<210> 608
 <211> 300
 <212> nucleic acid
 <213> Zea mays

<400> 608

agcgtgtccg cagcgagacc aacatatcat ctggtgctgt ttctgtcagt tcagcggcgg 60
 ttgaactggc cctgatgaag cttccgaagt ctgaagcact gtcagctagg atgcttctga 120
 ttggtgctgg taaaatggga aagctagtga tcaaacatct ggttgcgaaa ggatgcaaga 180
 aggttgttgt ggtgaaccgc tccgtggaaa ggggtggatgc tattcgtgag gagatgaaag 240
 atatagagat cgtgtacagg cctctctcag acatgtatca agctgctgct gaagctgatg 300

<210> 609
 <211> 234
 <212> nucleic acid
 <213> Zea mays

<400> 609

gttgaactgg ccctgatgaa gcttccgaag tctgaagcac tgtcagctag gatgcttctg 60
 attggtgctg gtaaaatggg aaagctagtg atcaaacatc tggttgcaa aggatgcaag 120
 aaggttgttg tggatgaaccg ctccgtggaa aggggtggatg ctattcgtga ggagatgaaa 180
 gatatataga tcgtgtacag gcctctctca gacatgtatc aagctgctgc tgaa 234

<210> 610
 <211> 278

<212> nucleic acid
<213> Zea mays

<400> 610

cgtgagactg gcggtggata acgcgtcatg gaccgacgat aagcagctcc aggacatgta 60
cctgatctgc aagtcctgcg cgatgcgaca tcgacgcacc tgggagcggg catgagagga 120
gaagctcaag gcgttcgagc tcgcactggc gacggcagac gccacgttct agaacctcga 180
ctcgtcggag atctcactga cggacgtgag ccactacttc gactcggacc cgatcaagct 240
cgtgcattgg ctgctcaaag acgggcgagc ggcgtcct 278

<210> 611
<211> 251
<212> nucleic acid
<213> Zea mays

<400> 611

gaagatgtgt acaggggaag tgacaagggc atactggctg acgtcgagct tctgaggcag 60
atcactgagg cttcgcgcgg cgccatcacc gccttcgttg agaagaccac aaacagcaaa 120
gggcaagtcg tcaatgttac caacaacctc agcaagatac ttggtttcgg tctgtcggaa 180
ccatgggtgc agtacctgtc cacgaccaag ttcgtcagag cggacagaga gaagatgagg 240
gttctgtttg g 251

<210> 612
<211> 126
<212> nucleic acid
<213> Zea mays

<400> 612

gttctagatc gccagtctct tctcctcctt agttttcctc ttcagttctg cccatctgat 60
ggctctagtg cagagctgct ccactctctt gtgcaatgca tgtgacttcc ctgtcctggg 120
gtccccg 126

<210> 613
<211> 296
<212> nucleic acid
<213> Zea mays

<400> 613

acgggatttg ccaaggatac aaacttggtc tcagtgtcga tgacaagaag ggacattcct 60
gccttgtcat cgaactgaga caagtgtatc cacgggattt gcccaaggaaa ttgcaagggg 120
tgcccagggg aaatattatt acctccctaa tgcttcagat gctgtaattt ctgctgactc 180
caagaccgcc ctgacagact tgaagagctc atgattttgc agcagcggca cccgttttct 240
gtaccttttg atagggatgg tgaaccttca ttcatgcagt aatttttgcg taggcc 296

<210> 614
<211> 286
<212> nucleic acid
<213> Zea mays

<400> 614

gtgaacactt gcttgatcgt attgcaatta atttaagtgc tgatcttcca atgagttttg 60
atgaccgcgt tgaagcagtg gatattgcaa cacggtttca ggagtctagc aaagaagttt 120
tcaaattggg ggaagaaaaa actgaaactg caaaaactca gataattttt gcaagagagt 180
atctgaagga tggtactatt agcacagagc agctcaaata tcttgctcatg gaagctatac 240
gaggtggctg tcaggggcat cgtgctgagt tgtatgctgc ccgagt 286

<210> 615
<211> 239
<212> nucleic acid
<213> Zea mays

<400> 615

cggacgcgtg gcaaccacgg ctgccttgaa gagcgccaag atcgtcgtgg accgtctcct 60
ggagaggcag acggctgaca atggcggcaa gtaccctgag acggtcgcac ttgtcctgtg 120
gggcaccgac aacatcaaga cctatgggtga gtcactagcc caggtgctgt ggatgattgg 180
agttcggcca gttgcgcaca ccttcggccg tgtcaaccgt gtggagcctg tcagccttg 239

<210> 616
<211> 233
<212> nucleic acid
<213> Zea mays

<400> 616

gggagtgctt gaagctcgtg gtacaggaca atgagctggg cagcggcaga ggctactggg 60

agacatcgga ggagaacctg gacaggctca gggagctcta ctcgagggtt gaagacaaga 120
 ttgaggggat tgaccggtaa accgatttgc cagattcaaa ggaatgagaa gcttgggaact 180
 cttgtgtctc attgaggctc ttgtacaatg tgtgtgtagc ttatatatat ata 233

<210> 617
 <211> 302
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (76)
 <223>

<400> 617

cggacgctgc gggtagcaga gggctcgttt cgacagggat ccgaagacgt tccgtgagtc 60
 gtatcatgac gatcangaga atctccagca gcagatatca tctgcacgga gtaaccttgg 120
 cgctgtgcag attgaccatg acctccgtgt caagatatcc aaggtgtgct ctgagttgaa 180
 cgttgatgga ctcagagggtg acattgtgac taacatggct gccaaaggcgc tggctgcggt 240
 gaaaagaatg gacagcgtca ccgtggagga cattgctact gtcattccca actgcttgag 300
 gc 302

<210> 618
 <211> 261
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (27), (95), (101), (109), (115), (120), (122), (124), (128),
 (142), (146), (153)... (154), (162), (175), (186), (192), (198),
 (206), (208)... (210), (215), (217), (222), (230)... (231),
 (239), (245), (249), (255)
 <223> unsure at all n locations

<400> 618

gtttgggttc ttgggggagt gcctgangct cgtcgtgcaa gacaacgagc tgggaagctt 60
 gaagcttgcc ctcgagggaa gctacgtcga gcctngcoct ngcggcganc cgatnecgtan 120
 cncnaagngc tcccgcaggg gnagancatc canntctcga tncgcagggtt atccnaaaca 180

aaagctncctt tnaagaancc aaaatngnnn gtggncnggt tncctggagn ngtgaaggnt 240
ggaanatgng gaaantaccc g 261

<210> 619
<211> 262
<212> nucleic acid
<213> Zea mays

<400> 619
ggggcatcgt gctgagttgt atgctgcccg agttgcaaaa tgtctagctg ctatggaagg 60
acgtgaaaaa gtatttgtgg atgacctcaa gaaagctgta gagctgggtca ttctacctcg 120
ctccatccta tctgataatc cacaggatca gcagcaagag catccacccc ccccccgcc 180
gccaccacct ccagaaaatc aagattcttc agaagaccaa gatgaggaag acgaagacca 240
agaggatgat gaagaagaaa at 262

<210> 620
<211> 125
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (68)
<223>

<400> 620
ccagttctgg ctcggcggct cgtcggacaa tctccagaac ttccttaaga tgatcggcgg 60
ctggtacntg cctgccctca aaggcgccgg catcaagtac gacgaccccc gtgctctacc 120
tcgac 125

<210> 621
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 621
gcaagggttg cccaggggaa atattattac ctccctaattg cttcagatgc tgtaatttct 60
gctgccacca agaccgccct gacagacttg aagagctcat gatcttgcag cagcggcacc 120
cgttttctgt accttttgat agggatggtg aaccttcatt catgcagtaa tttttgcgta 180

ggcctctaca atgacagggg gaaacaaacc cgagcatggc atcgtgtaaa gtgttaaggt 240
ccaatggcct cctgtccacg tttggcgatg taaatcctcc 280

<210> 622
<211> 274
<212> nucleic acid
<213> Zea mays

<400> 622

cagtaaggag gttagctggt gatgccacgc ttagagcagc tgcaccatac caaaaactgc 60
gcagagagaa agaacgtgac aaaacaagaa aggttttcgt tgaaaagact gacatgagag 120
ccaaaagaat ggctcgaaaa gcagggtgctc tagtcatatt tgttgtggac gctagtggta 180
gcatggctct gaatcgtatg cagaatgcta aagggtgcgc gttgaagttg cttgcagaaa 240
gctacaccag cagagatcag gtttcaatta ttcc 274

<210> 623
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 623

aaagcctatg cttcctaagg gtccagtaag gaggttagct gttgatgcca cgcttagagc 60
agctgcacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaagggttt 120
tgttgaaaag actgacatga gagccaaaag aatggctcga aaagcaggtg ctctagtcac 180
atgtgtgtg gacgctagt gtagcatggc tctgaatcgt atgcagaatg cttaaagggtgc 240
ggcgttgaag tt 252

<210> 624
<211> 252
<212> nucleic acid
<213> Zea mays

<400> 624

aaagcctatg cttcctaagg gtccagtaag gaggttagct gttgatccca cgcttagagc 60
agctccacca taccaaaaac tgcgcagaga gaaagaacgt gacaaaacaa gaaagggttt 120
tgttgaaaag actgacatga gagccaaaag aatggctcga aaagcaggtg ctctagtcac 180

<210> 628
 <211> 306
 <212> nucleic acid
 <213> Zea mays

<400> 628

gtcgacgtgc tgctggattc cgctgcgtcg ggggtgaaca cgggtggagag ggacgggtatc 60
 tccatatccc accctgctcg cttcatcctc atcggtctctg gtaaccggga ggaaggggag 120
 ctcaggcccc agctgctgga cgggttcggg atgcacgcgc aggttggtac cgtcagggac 180
 gccgagctca ggggtgaagat cgtggaggag agggctcggt tcgacaggga tccgaagacg 240
 ttccgtgagt cgtatcatga cgagcaggag aagctccagc agcagatatc atctgcacgg 300
 agtaac 306

<210> 629
 <211> 269
 <212> nucleic acid
 <213> Zea mays

<400> 629

acctcggtga cgtgctgctg gattccgctg cgtcgggggtg gaacacgggtg gagaggggag 60
 gtatctccat atcccaccct gctcgcttca tctcatcgg ctctggtaac ccggggaag 120
 ggagctcagg cccagctgc tggaccgggt cgggatgcac gcgcagggtg gtaccgtcag 180
 ggacgccgag ctcagggtga agatcgtgga ggagagggct cgtttcgaca gggatccgaa 240
 gacgttccgt gagtcgacca tgacgagca 269

<210> 630
 <211> 269
 <212> nucleic acid
 <213> Zea mays

<400> 630

cacctgctc gcttcatcct catcggctct ggtaaccgg aggaagggga gctcagggcc 60
 cagctgctgg accggttcgg gatgcacgcg cagggttgta ccgtcaggga cgccgagctc 120
 aggggtgaaga tcgtggagga gagggctcgt ttcgacagg atccgaagac gttccgtgag 180
 tcgtaccatg acgagcagga gaagtccagc agcagatatc atctgcacgg ataacttggc 240

ccgagggcgt caaggcggtc gagcccggcc tgctcgccaa ggccaacagg ggcatactgt 120
acgtcgacga ggtcaacctg ctggacgacc acctcgtcga cgtgctgctg gattccgctg 180
cgtcgggggtg gaacacggtg gagagggagg gtatctccat atcccaccct gctcgttca 240
tcctcatcgg ctctggtaac ccggaggaag ggg 273

<210> 634
<211> 227
<212> nucleic acid
<213> Zea mays

<400> 634

agatcggcgg cgtcatgata atgggcgaca ggggcacggg gaagtccacc accgtccgct 60
ccctcgtcga cctgctcccg gacatccgag tcgtcgtcgg cgacccttc aactccgacc 120
cggacgaccc cgagggtcatg ggccccgagg tccgccagcg ggtcctgcag ggggacaccg 180
gcctccccgt caccaccgcc aagatcacca tggtcgacct gccctc 227

<210> 635
<211> 372
<212> nucleic acid
<213> Zea mays

<400> 635

cccacgcgtc cgggcaagtc gtcaatgttg ccaacaacct cagcaagata cttgggtttcg 60
gcctgtcggg accatgggtg cagtacctgt ccacgaccaa gttcgtcaga gcggacagag 120
agaagatgag ggttctgttt gggttcttgg gggagtgcct gaggctcgtc gtgcaagaca 180
acgagctggg aagcttgaag cttgccctcg agggaaagcta cgtcgagcct ggccctggcg 240
gcgacccgat ccgtaaccgg aagggtgctcc cgacagggaa gaacatccac gctctcgatc 300
cgcaggccat cccaaccacg gctgccttga agagcgccaa gatcgtcgtg taccgtctcc 360
tgagagggca ga 372

<210> 636
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 636

gttcgtcaga gcggacagag agaagatgag ggttctgttt gggttcttgg gggagtgcct 60
gacggtcgtc gtgcaagaca acgagctggg aagcttgaag cttgccctcg agggaagcta 120
cgtcgagcct ggccctggcg gcgacccgat ccgtaaccgc aaggtgctcc cgacagggaa 180
gaacatccac gctctcgatc cgcaggccat cccaaccacg gctgccttga agagcgccaa 240
gatcgtcgtg gaccgtctcc tgg 263

<210> 637
<211> 272
<212> nucleic acid
<213> Zea mays

<400> 637

cccacgcgtc cggttgccaa caacctcagc aagatacttg gtttcggcct gtcggaacca 60
tgggtgcagt acctgtccac gaccaagtgc gtcagagcgg acagagagaa gatgaggggt 120
ctgtttgggt tcttggggga gtgcctgatg ctgcgtcgtc aagacaacga gctgggaagc 180
ttgaagcttg ccctcgaggg aagctacgtc gagcctggcc ctggcggcga ccgatccgt 240
aaccgaagg tgctcccgac aggaagaac at 272

<210> 638
<211> 273
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (27), (29), (40), (46), (116), (154), (161)... (162), (170),
(202), (251)
<223> unsure at all n locations

<400> 638

gtttgggttc ttgggggagt gcctgangnt cgtcgtgcan gacaangagc ttggaatctt 60
gaatcttgcc ctcgagggaa gctacgtcga gcctggccct ggcggcgacc cgattncgta 120
acccgaaggt gctcccgaca ggaagaacat ctangctctt nnatccgcan gccatcccaa 180
ccacggctgc cttgaagagc gncaagatcg tcgtggaccg tctcctggag aggcagaagg 240
ctgacaatgg nggcaagtac cctgagacgg tcg 273

<210> 539
 <211> 301
 <212> nucleic acid
 <213> Zea mays

<400> 639

acttgctgaa gcacatagag gtgttcttta tgttgatgaa ataaatctat tggatgatgg 60
 cataagcaat ctacttctga atgtcttgac ggaggagatt aacattgtgg aaagagaggg 120
 cattagcttt cgccatccct gcaaaccact tctaattgct acttacaatc cagaggaagg 180
 gtctgtacgt gaacacttgc ttgatcgtat tgcaattaat ttaagtgtg atcttccaat 240
 gagttttgat gaccgcgttg aagcagtga tattgcaaca cggtttcagg agtctagcaa 300
 a 301

<210> 640
 <211> 307
 <212> nucleic acid
 <213> Zea mays

<400> 640

ggtgttcttt atgttgatga aataaatcta ttggatgatg gcataagcaa tctacttctg 60
 aatgtcttga cggaggaggt taacattgtg gaaagagagg gcattagctt tcgccatccc 120
 tgcaaaccac ttctaattgc tacttacaat ccagaggaag gatctgtacg tgaacacttg 180
 cttgatcgta ttgcagttaa tttaagtgtg gatcttccaa tgagttttga tgaccgcgtt 240
 gaagcagtgg atattgcaac acggtttcag gagtctaggc aagaagtttt caaattggtg 300
 gaagaaa 307

<210> 641
 <211> 278
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (50)
 <223>

<400> 641

tgttgatgaa ataaatctat tggatgatgg cataagcaat ctacttctgn atgtcgtgac 60

ggagggagtt aacattgtgg aaagagaggg gattagcttt cgccatccct gcaaaccact 120
tctaattgct acttacaatc cagaggaagg atctgtacgt gaacactctg ctgatcgtat 180
tgcattaatt aagtgtgat cagcaatgag tttgatgacg cgttgaacat ggatatcaca 240
ccggttcaga gctacaagaa tttcaatcgt ggagaaaa 278

<210> 642
<211> 426
<212> nucleic acid
<213> Zea mays

<400> 642

cccacgcgtt cgcccacgcg ttcgcggtga caaggggtgt ctcgaacgca tcaggctggt 60
actcgtccaa cgtgaacctg gccgtggaga acgcgtcatg gaccgacgag aagcagctcc 120
aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgccccca ggggcaggca 180
tgaaggagaa gcgcaaggcg ttcgagctcg ccctggcgac ggcggacgcc acgttccaga 240
acctcgactc gtcggagatc tcgctgacgg acgtgagcca ctacttcgac tcggacccga 300
ccaagctcgt gcaggggctg cgcaaggacg ggcgggcgcc gtctctgtac atagccgaca 360
ccaccacggc gaacgcccag gtgaggacgc tgtcggagac ggtgcgcctc gacgcgagga 420
ccaagc 426

<210> 643
<211> 312
<212> nucleic acid
<213> Zea mays

<400> 643

ccgcgtgtcg ctaagggagg cggcgacaag ggtgttctcg aacgcatcac gctcctactc 60
gtccaacgtg aacctggccg tggagaacgc gtcattggacc gacgagaagc agctccagga 120
catgtacctg acccgcaagt ccttcgcgtt cgacagcgac gcccagggg caggcatgaa 180
ggagaagcgc aaggcgttcg acctcgccct ggcgacggcg gacgccacgt tccagaacct 240
cgactcgtcg gagatctcgc tgacggacgt gagccactac ttcgactcgg acccgaccaa 300
gctcgtgcag gg 312

<210> 644

<211> 287
<212> nucleic acid
<213> Zea mays

<400> 644

acgtgagcca ctacttcgac tcggacccga ccaagctcgt gcaggggctg cgcaaggacg 60
ggcggggcgcc gtcctcgtac atagccgaca ccaccacggc gaacgccagg tgaggacgct 120
gtcggagacg gtgcgcctcg acgcgaggac caagctgctg aacccaagt ggtacgaggg 180
gatgatgaag agcgggtacg aggggggtcag ggagatcgag aagcggctca ccaacaccgt 240
cgggtggagc gccacgtctg ggcaggctga caactgggtc tacgagg 287

<210> 645
<211> 279
<212> nucleic acid
<213> Zea mays

<400> 645

gtacctgagc cgcaagtcc tgcggttcga cagcgacgcc ccaggggcag gcatgaagga 60
gaagcgcaag gcgttcgagc tcgccctggc gacggcggac gccacgttcc agaacctga 120
ctcgtcggag atctcgtga cggacgtgag ccactacttc gactcggacc cgaccaagct 180
cgtgcagggg ctgcgcaagg acgggcgggc gccgtcctcg tacatagccg acaccaccac 240
ggcgaacgcc aggtgaggac gctgtcggag acggtgcgc 279

<210> 646
<211> 280
<212> nucleic acid
<213> Zea mays

<400> 646

aagatggtgg ccgaactgga cgagccagca gagatgaact acgtgcgaat accccaggag 60
taggcggagg agctcggcgt gtcgctaagg gaagcggcga caaggggtgt ctcgaacgca 120
tcaggctcct actcgtccaa cgtgaacctg gcggtggaga acgcgtcatg gaccgacgat 180
aagcagctcc aggacatgta cctgagccgc aagtccttcg cgttcgacag cgacgccct 240
ggggcaggca tgaaggagaa gcgcaaggcg ttcgagctcg 280

<210> 647

<211> 213
<212> nucleic acid
<213> Zea mays

<400> 647

ggcgacggcg gacgccacgt tccagaacct cgactcgtcg gagatctcga tgacggacgt 60
gagccactac ttcgactcgg acccgaccaa gctcgtgcag gggctgcgca aggacgggcg 120
ggcgccgtcc tcgtacatag ccgacaccac cacggcgaac gccaggtga ggacgctgtc 180
ggagacggtg cgctcgcacg cgaggaccaa gct 213

<210> 648
<211> 166
<212> nucleic acid
<213> Zea mays

<400> 648

aagcacgccc aggagcaggc ggaggagctc ggctgtcgc taaggaggc ggcgacaagg 60
gtgttctcga acgcatcagg ctctactcg tccaacgtga acctgacggt ggagaacgcg 120
tcatggaccg acgagaagca gctccaggac atgtacctga gccgca 166

<210> 649
<211> 449
<212> nucleic acid
<213> Zea mays

<400> 649

gggatgatga agagcgggta cgaggggggtc agggagatcg agaagcggct caccaacacg 60
cgtcgggtgg agcgccacgt ctgggcaggt cgacaactgg gtctacgagg aggccaactc 120
cacgttcacg gaggacgagg cgatgaggaa gaggctcatg gacaccaacc ccaattcggt 180
caggaagttg gtgcagacct tcctggaagc cagtggcaga ggctactggg agacaacgga 240
ggagaacctg gacaggetca gggagctcta ttcggagggt gaagacaaga ttgaggggat 300
tgacaggtaa attgatttgc cagatcggtc ggccgatcgg ttccagcatt caaccataa 360
cgagcttgga actcttctgc ctcatggga ctcttgta atgtctgggt gtgtgattta 420
tatatatata aaagtgtaac atgtaatac 449

<210> 650

<211> 305
<212> nucleic acid
<213> Zea mays

<400> 650

cgagaagcgg ctcaccaaca ccgtcgggtg gagcgccacg tctgggcagg tgcacaactg 60
ggtctacgag gaggccaact ccacgttcat cgaggacgag gcgatgagga agaggctcat 120
ggacaccaac cccaattcgt tcaggaagtt ggtgcagacc ttcctggaag ccagtggcag 180
aggctactgg gagacaacgg aggagaacct ggacaggctc agggagctct attcggaggt 240
tgaagacaag attgagggga ttgacaggta aattgatttg ccagatcggg cggccgatcg 300
gttcc 305

<210> 651
<211> 270
<212> nucleic acid
<213> Zea mays

<400> 651

gacgcgagga ccaagctgct gaacccaag tggtagcagg ggatgatgaa gagcgggtac 60
gaggggggtca gggagatcga gaagcggctc accaacaccg tcgggtggag cgccacgtct 120
gggcaggctcg acaactgggt ctacaggag gccaactcca cgttcatcga ggacgagggc 180
atgaggaaga ggctcatgga caccaacccc aattcgttca ggaagttggt gcagaccttc 240
ctggaagcca gtggcagagg ctactgggag 270

<210> 652
<211> 440
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (412)
<223>

<400> 652

cattgttcag ctgccggtc agtatctgag actcgtgggt cgtcacaagc ctctacactg 60
acgtcctact aggacgaggc gatgaggaag aggtcatgg acaccaaccc caattcgttc 120
aggaagttgg tgcagacctt cctggaagcc agtggcagag gctactggga gacaacggag 180

gagaacctgg acaggctcag ggagctctat tcggaggttg aagacaagat tgaggggatt 240
gacaggtaaa ttgatttgcc agatcggtcg gccgatcggt tccagcattc aacccataac 300
gagcttgga cttctctgcc tcattgggac tcttgtaaa tgtctgggtg tgtgatttat 360
atatatataa aaagttgtaa catgtaatac tggaggatac aatatttaac anagagggtg 420
gcggttggtc catccaaaac 440

<210> 653
<211> 213
<212> nucleic acid
<213> Zea mays

<400> 653

tgcagatccg gacattatcc gtcttcttag gctctttcgc tttctgcaga agccacttgc 60
aaaattcata tcagaagtga gagcaccaaa aagtaaggaa ggttatgcat ccataggtgg 120
cggttctcct ctacgacaaa ttactgatgc acaggctgaa gcaactgaggg aggcattaca 180
tgggaaagat gccctgccaa cgtgtatggt gga 213

<210> 654
<211> 261
<212> nucleic acid
<213> Zea mays

<400> 654

cccacgcgtc cgggtaccct ttcacagaag aggccattga tcaaattaaa aaggataaga 60
ttaccaagct cgttggttctt cccctttacc ctcaagtact catatcaaca agtgggtcaa 120
gcattcgtgt tctccaagac attgtcaagg aagattcata tttttctgggt ttgccaattt 180
ccattattga atcatggtac caacgagatg gctatgtgaa atcaatgtct gacctaatg 240
aaaaggagct ctggccttc t 261

<210> 655
<211> 291
<212> nucleic acid
<213> Zea mays

<400> 655

tgagatccag aggaatctta aatggtcaca ctttggcgta tcagagtcgg gtgggaccag 60

ttcaatggct gaagccatat actgatgaag ttttagtaga aattgggtcag aacgggtgtga 120
 agagcctcct ggctgttcca gtaagcttcg tgagcgagca cattgagaca ctggaagaaa 180
 tagacatgga gtacaaggag ttggctctgg aatcaggcat tgagaactgg ggccgggtcc 240
 ctgctcttgg atgcacttcg acgttcacat cgcacttgca gatgcggttg t 291

<210> 656
 <211> 275
 <212> nucleic acid
 <213> Zea mays

<400> 656

actgctagca gcatacgact cgaagcgaga tgagctccct ccaccggtaa tcgtgtggga 60
 gtggggctgg acaaagagcg cggagacctg gaatagccgt gcggcgatgc tggccgtgct 120
 ggctctcctg gtgctggaag tgaccaacgg cgaagggttc ctgcatcaat ggggaatcct 180
 gcctctgttc cgctgagccg acaattctgt tcatgatggg gtcataattt tgctgcagcc 240
 gaaggaagtt ttgaacttct gatgctgtat atgaa 275

<210> 657
 <211> 261
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (247)...(248)
 <223> unsure at all n locations

<400> 657

atcaagagga atcttagata gtcatacttt ggcgtaccag aatcgggtgg agctagttca 60
 atggctgaag ctatatactg atgaagtatt agtagaactt ggtgaaaagg gtgtgaagag 120
 cctactggct gttacagtaa gccttgagag taaagacatc gagacattgg aagaaattga 180
 catggagtac aaggagttgg ctctggaatc aggcatacaag aactggggtc gggttcctgc 240
 totgatnnac acttcaacat t 261

<210> 658
 <211> 398
 <212> nucleic acid

<213> Zea mays
 <400> 658
 acggacgcgt gggtttagca taacacgggg tgcattgcaca tgcattccgat tccctgcac 60
 actcacacct cactttttct gctaaattgt ggcagtgggtg ataattgata tgcattagact 120
 gtactttattt aatgactatg aaataccatt taacattagct attgtgcctg acagggtaaa 180
 tctaccaagg acacacattag ttaagccttg ctcagctgac gactgctaag gaattttctgt 240
 taagtgcagt ttgggggggtc ttctcaacca ttgcttgact taaggcaaca cattagagga 300
 tattcatcag catcagaggc aattcttccc aatctgattt gagaaaaaaaa tttgttgga 360
 acgaaaaatt agtgttttct tgctgaatct tgggggggc 398

<210> 659
 <211> 356
 <212> nucleic acid
 <213> Zea mays
 <400> 659
 gctttgatca tgggggagtt aagatcaaga ggaatcttaa atagtcacac tttggcgtac 60
 caggtaaatt ctattaaaat ttggtaggta attgtttcac taacaacga gttgtgccct 120
 tatgttttaa tgatcacctt gtaagaacac taggaatgga aactgccaag ttatataggc 180
 ttcaggagtt accagttcct taattttcca ggtcaocatt aactagtgtt aacattttatt 240
 gtacacgcag agtcgggtgg ggccagttca atggctgaag ccatatactg atgaagtttt 300
 agtagaactt ggtcaaaagg gtgttaagag cctcctggct gttccagtaa gctttg 356

<210> 660
 <211> 266
 <212> nucleic acid
 <213> Zea mays
 <400> 660
 cccacgcgtc cgaaagatgt tccctccaac gtgtatgttg gaatgcggta ttggcatccc 60
 ttactgaag aagccataga acaataaaaa cgggatggaa tcacgaaact tgttgtgttg 120
 cctctatacc ctcagttctc catatcaact agtgggtcaa gtctccgttt attggagagc 180
 atattcagag aggatgagta tctcgtgaat atgcaacata cagttatacc ttcttggtac 240

caacgtgaag gatatatcaa ggctat 266

<210> 661
<211> 260
<212> nucleic acid
<213> Zea mays

<400> 661

cggacgcgtg gcgcgacgcg tgggcgacgc cgtgggcgga cgggtgggaa agatgttcct 60
gccaacgtgt atgttggaat gcggtatttg catccctatc actgaagaag ccatagaaca 120
aacaaaacgg gatgcaatca cgaaacttgt tgtgttgccct ctataccctc agttctccat 180
atcaactagt ggttcaagtc tccgtttatt ggagagcata ttcagagagg atgagtatct 240
cgtgaatatg caacatacag 260

<210> 662
<211> 195
<212> nucleic acid
<213> Zea mays

<400> 662

cccacgcgtc cgcacacgcg tccgcccacg cgtccgccc cgcgtccgat ggaatcacga 60
aacttggtgt gttgcctcta taccctcagt tctccatata aactagtggg tcaagtctcc 120
gtttattgga gagcatatcc agagaggatg agtatctcgt gaatatgcaa catacagtta 180
taccttcctg gtacc 195

<210> 663
<211> 430
<212> nucleic acid
<213> Zea mays

<220>
<221> unsure
<222> (384), (402), (419), (421)
<223> unsure at all n locations

<400> 663

gccgccgttg ggccttttgc cggcgacggg aaccatcac accaggtcat ggggcaaac 60
aacctccaca agttttactg gttctaccac caaacatgag cagagcttgc atggaaatgt 120
taagccgttg caattggcgg caaatgaatc ctctcgtttg gttacagaa gtccagcact 180

taaaaaccag tggaatcttc ctgctagttc ttcctccact aatgtgggta ccacctttga 240
 tgataacgaa cacgtgtctt ccagtgttat tgaagaaaaa gttggagtac tgttattaaa 300
 ccttggtggt ccagagacac ttgacgatgt tcaaccatth ttattcaacc tatttgctga 360
 tccagatatc attcgactcc ctangctctt caagtttcct cnaagacact gggcaaact 420
 ntatttaatt 430

<210> 664
 <211> 199
 <212> nucleic acid
 <213> Zea mays

<400> 664

aaacaacctc cacaagtttt actggttcta ccaccaaaca tgagcagagc ttgcatggaa 60
 atgttaagcc gttgcaattg gcggcaaatg aatcctctcg tttggcttac agaagtccag 120
 cacttaaaaa ccagtggaat ctctctgcta gttcttcttc cactaatgtg gttaccacct 180
 ttgatgataa cgaacacgt 199

<210> 665
 <211> 443
 <212> nucleic acid
 <213> Zea mays

<400> 665

gccacgtttg gtagttgcta cttgctacac cggaggaaga agaacaagta gtgcttttct 60
 tctcttgtca cgttcacggg gcggccgac gaccgttcac ctgcgccgac ggccaagca 120
 gccatgtct tcgtcgggccc cctccccggc gacgggaatc cacgcgtcgc cgccgttggg 180
 ccttttgccg gcgacgggaa cccatcacac caggtcatgg ggcaaaacaa cctccacaag 240
 ttttactggt tctaccacca aacatgagca gagcttgcac ggaaatgtta agccgttgca 300
 attggcggca aatgaatcct ctggtttggc ttacagaagt ccagcactta aaaaccagt 360
 gaatcttctt gctagttctt cctccactaa tgtggttacc acctttgatg ataacgaaca 420
 cgtgtcctcc agtgttattg aag 443

<210> 666
 <211> 304

<212> nucleic acid
<213> Zea mays

<400> 666

gagactccat atcaacaagt agcatatddd ttactaagaa gaagagaagg gaagattcat 60
attdtttctgg cttgccaatc tccattatcg aatcatggta ccaacgtgat ggctatgtga 120
aatcaatggc tgacctaatt gaaaaagagc tatctgcctt ttccaatcct gaagaggtaa 180
tgatatgctt cagtgcacat ggtgtgccac ttacctatgt tcaggatgct ggagatcctt 240
acagagatca gatggaggat tgtattdctg tgatcatggg ggagctgaga tccagaggaa 300
tctt 304

<210> 667
<211> 256
<212> nucleic acid
<213> Zea mays

<400> 667

ttcgtgttct ccgaaatggt gtcaaggag attcatattd ttctggcttg gcaatctcca 60
gtatcgaatc atggtagcaa cgtgatggct atgtgaaatc agtggctgac ctgattgaga 120
aagaggatc tgccttdtcc agtcctgaag aggtagtgat attcttcagt gcacatagtg 180
tgccacttag ctatgtgcag gatgctggag atccttacag agatcagatg gatgattgta 240
tttctttgat cgtggg 256

<210> 668
<211> 263
<212> nucleic acid
<213> Zea mays

<400> 668

agaggttatg atattcttca gtgcacatgg tgtgccactt acctatgttg aggatgctgg 60
agatccttac agagatcaga tggaggattg tattgcttdg atcatggggg agttaagatc 120
aagaggaatc ttaaatagtc aacttdtggc gtaccagagt cgggtggggc cagttcaatg 180
gctgaagcca tatactgatg aagtdtdtagt agaacttggc caaaagggtg tgaagagcct 240
catggctggt ccagtaagct ttg 263

<210> 669
 <211> 266
 <212> nucleic acid
 <213> Zea mays

<400> 669

agaggttatg atattcttca gtgcacatgg tgtgccactt acctatgttg aggatgctgg 60
 agatccttac agagatcaga tggaggattg tattgctttg atcatggggg agttaagatc 120
 aagaggaatc ttaaatagtc acactttggc gtaccagagt cgggtggggc cagttcaatg 180
 gctgaagcca tatactgatg aagttttagt agaacttggc caaaagggg tgaagagcct 240
 cctggctgtt ccagtaagct ttgtga 266

<210> 670
 <211> 276
 <212> nucleic acid
 <213> Zea mays

<400> 670

atctgccttt tccaatcctg aagaggtaat gatattcttc agtgcacatg gtgtgccact 60
 tacctatgtt caggatgctg gagatcctta cagagatcag atggaggatt gtatttcttt 120
 gtcacatggg gagctgagat ccagaggaat cttaaattgg cacactttgg cgtatcagag 180
 tcgggtggga ccagttcaat ggctgaagcc atatactgat gaagtttttag tagaacttgg 240
 tcagaacggt gtgaagagcc tcctggctgt tccagt 276

<210> 671
 <211> 307
 <212> nucleic acid
 <213> Zea mays

<400> 671

ctgttattaa accttggtgg tccagagaca ctgacgatg ttcaaccatt tttattcaac 60
 ctatttgctg atccagatat cattcgactc cctaggctct tcaggtttct tcaaagacca 120
 ctggccaaac ttatttctac ttttagagct cctaagagta aagaagggtg tgcttcaatg 180
 gtggtgggtc gccgttaagg aaaattactg atgaacaggc gaatgctttg aagattgccc 240
 tggaaaagaa aaaattgaac gcaaacatat atgttgggat gcggtatttg taccctttca 300
 cagaaga 307

<210> 672
 <211> 310
 <212> nucleic acid
 <213> Zea mays

<400> 672

ctgttattaa accttggtgg tccagagaca cttgacgatg ttcaaccatt tttattcaac 60
 ctatttgctg atccagatat cattcgactc cctaggctct tcaggtttct tcaaagacca 120
 ctggccaaac ttatttctac ttttagagct cctaagagta aagaagggtg tgcttcaatt 180
 ggtggtgggt cgccgttaag gaaaattact gatgaacagg cgaatgcttt gaagattgcc 240
 ctggaaaaga aaaaattgaa cgcaaacata tatgttggga tgcggtattg gtaccctttc 300
 acagaagagg 310

<210> 673
 <211> 122
 <212> nucleic acid
 <213> Zea mays

<400> 673

cccacgcgtc cggtttcaat cggtggtggg tcaccattga ggaaaattac tgatgagcag 60
 gcaaattgctt tgaagattgc tctggaaaag aaaaaattga acgcaaatat atatgttggg 120
 at 122

<210> 674
 <211> 431
 <212> nucleic acid
 <213> Zea mays

<220>
 <221> unsure
 <222> (402)
 <223>

<400> 674

cggacgcgtg ggttggaacca gtggaatggc tgaaaccgta cactgatgag acagtgatgg 60
 agcttgggca gaaaggggta aagagcctgc ttgctgttcc cattagtttt gttagcgaac 120
 acattgaaac tttggaagaa atcgatgtgg agtaciaaaga gttggctttg gaatctggca 180

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tcaagcactg gggacgggtt ccagcactag gttgcgaacc cacattcatt tcggatcttg 240
 ctgatgctgt tattgaaagc ctacattatg ttggcgcaat ggcagtttcc aatcttgagg 300
 ctcggcagtc tctcgtaacc ctcggaagcg tggaggagct gctagcagca tacgactcga 360
 agcgcgatga gtcacctcca ccggtaatcg tgtgggagtg gngctggaca aagagcgcg 420
 agacctggaa t 431

<210> 675
 <211> 298
 <212> nucleic acid
 <213> Zea mays

<400> 675

agactggaaa aaagaggaat aacaaatccg tgcatacttg cttatcagag ccgagttgga 60
 ccagtggaaat ggctgaaacc gtacactgat gagacaatta ttgagcttgg gcagaaagg 120
 gtaaagagcc tgcttctgt tccattagt ttgttagcg aacacattga aactttggaa 180
 gaaatcgatg tggagtacaa agagttggct ttggaatctg gcatcaagca ctggggacgg 240
 gttccagcac taggttgcga acccacattc atttcggatc ttgctgatgc tgttattg 298

<210> 676
 <211> 308
 <212> nucleic acid
 <213> Zea mays

<400> 676

gagacgcgtg gcggacgcgt gggcgacgc gtggggccga gttggaccag tggaatggct 60
 gaaaccgacc actgatgaga ctattattga gattgggcag aaaggggtaa agagcctgct 120
 tgctgttccc attagttttg ttagcgaaca cattgaaact ttggaagaaa tcgatgtgga 180
 gtacaaagag ttggcttttg aatctggcat caagcactgg ggacgggttc cagcactagg 240
 ttgcgaaccc acattcattt cgtatcttgc tgatgctgtt attgaaacct accttatgtt 300
 ggcgcatg 308

<210> 677
 <211> 174
 <212> nucleic acid
 <213> Zea mays

<400>

677

cccacgcgtc cggcttgggc agaaaggggt aaagagcctg cttgctgttc ccattagttt 60
tgttagcgaa cacattgaaa ctttgaaga aatcgatgtg gagtacaaag agttggcttt 120
ggaatctggc atcaagcact ggggacgggt tccagcacta ggttgccaac ccac 174

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